VOL. X, NO. 6 FEBRUARY, 1911 15 CENTS

THE SCHOOL ARTS BOOK

PUBLIC LIBRARY
SEP 28 1911
DETROIT, MICH.

PICTORIAL NUMBER

NATIONAL ARTS PUBLISHING COMPANY of BOSTON MASS.

CRAYONS for EVERY SCHOOL USE

"STAONAL"

For Kindergarten, Marking and Checking

"AN-DU-SEPTIC"

Dustless White and Colored Chalks

"CRAYOLA"

For General Color Work, Stenciling, Arts and Crafts

"DUREL"

Hard Pressed for Pastel Effects

Samples furnished upon application

BINNEY & SMITH CO.

81-83 FULTON STREET NEW YORK

500911

"THE SCHOOL ARTS BOOK," FEBRUARY, 1911

"BEAUTY IS ITS OWN EXCUSE FOR BEING"

A WATER COLOR DRAWING BY FREDERICK WHITNEY

PUBLIC LIBRARY
No. 705 S25
DETROIT, MICH.
v. 10, pt. 2.

The School Arts Book

Vol. X FEBRUARY, 1911 No. 6

USEFUL PICTORIAL DRAWING

LET us hope that the day in which drawing was introduced in our schools as an isolated subject is rapidly becoming a thing of the past. Where courses of study have been considered in relation to the real needs of the children, teachers have great opportunities to relate the drawing and construction work to the daily lessons in the schoolroom, and to occupations in the homes of the children.

We will agree that a course of study should be worked out for every community, not by one teacher, but by all, thus making it possible to relate subjects such as reading, history, and geography with drawing; mathematics and design with construction work in some degree.

Thru the child's interest in the use of brush, pencil, and tools, facts about which he is studying may be made clearer than simply thru mental pictures.

We used to talk of object drawing in the schools as one means of teaching children how to draw, perhaps forgetting the larger significance of its relation to something of vital interest and value to the children. Now we are beginning to think of object drawing in its relation to some particular phase of school work, and in this way the children gain a truer knowledge of some historical fact, or of some point in a geography or a reading lesson; and are learning to draw at the same time.

Let us take as an illustration three important phases of life, by the study of which we naturally know something of a people either of the present day or of early times.

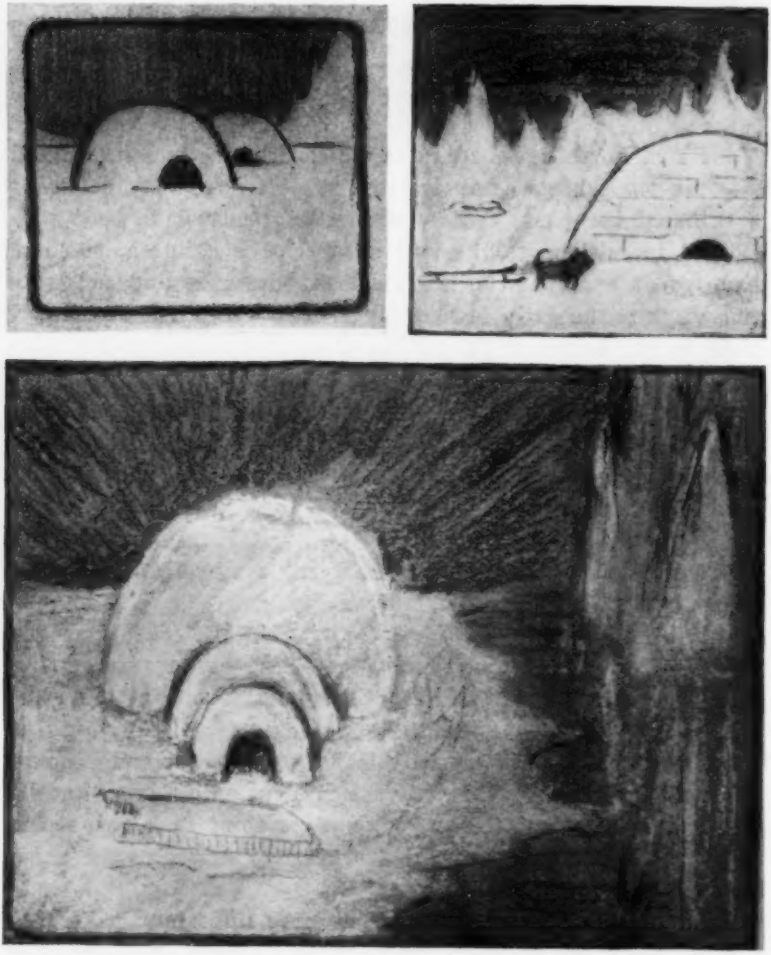


Plate I. The Eskimo lives in the land of icebergs and the aurora borealis.

Plate II. Illustrations of various primitive dwellings, all of which may be associated in the mind of the child with type solids.

Shelter, food, and clothing have been since time immemorial the important factors in living, and we can make our drawing both illustrative and decorative along these lines, and

Plate III. The colonial home and its details.

construction work can be added where it is feasible.

It is very important for the teacher of drawing to know just what the children are studying, or the drawing lesson should be given by the grade teacher, who can do it better than any one else if she has had the training which will lead her to make a unit of her work.

The lessons can be developed with the use of prints, photographs, and objects in connection with the daily lessons. It will be necessary for the teacher to do some illustrative work on large sheets of paper placed on the wall where all can observe, and with questioning one step after another can be brought out.

Plate I, a, b, and c, II, a, b, c, and d, are illustrative lessons developed while studying different types of shelters used by primitive people. The type forms are fundamental and can be used if desired. Plate I, a, b, and c, introduce the hemisphere. Plate II, a and b, the cone, etc.

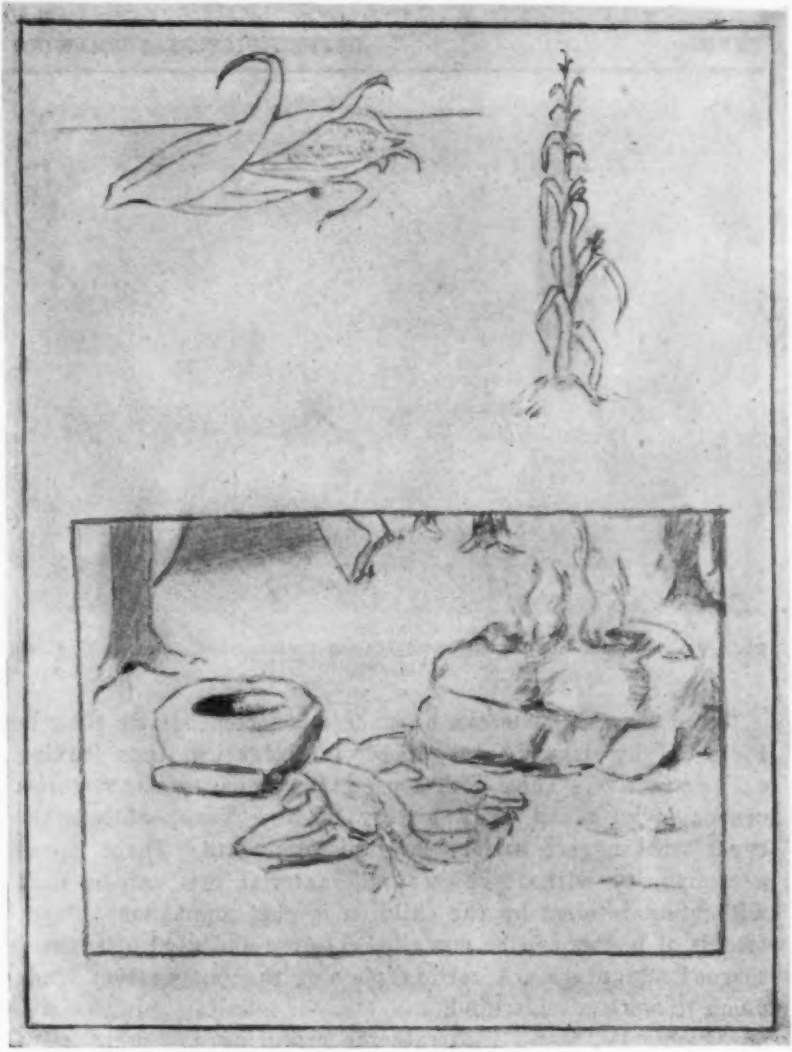


Plate IV. Illustrations of primitive food supplies. Indian. Drawings by J. Burgess.

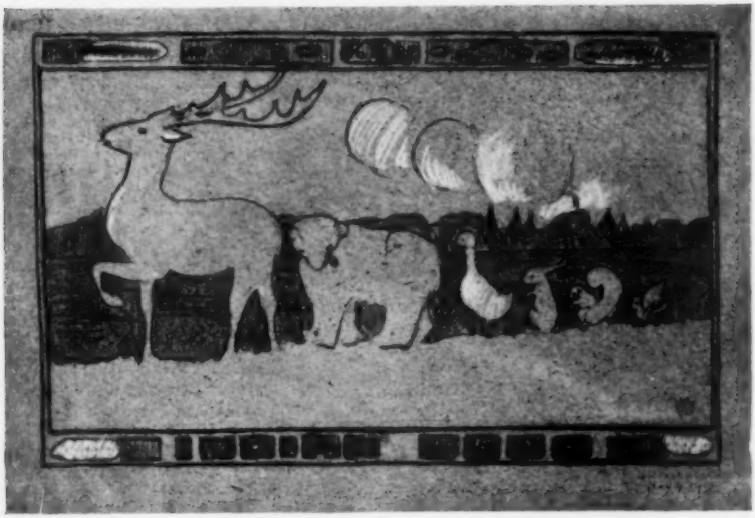


Plate V. A decorative panel illustrating Indian food supplies, designed by F. H. Bacheler.

The colonial home can be made much more simple than in Plate III by drawing only the front elevation, thus leaving out perspective. The Dutch house gives a clue to many stories connected with the early history of New York, while other types will suggest various local historic facts. There is not a community without objects and material that can be used with great interest by the children in this connection. Paper models of houses can be made by children and used oftentimes to good advantage. A certain play of the imagination lends much to work of this kind.

Plates IV, V, VI illustrate the procuring and preparation of foods. These lessons may be developed in many other ways, for there is no limit to material that is suggestive. In Plate

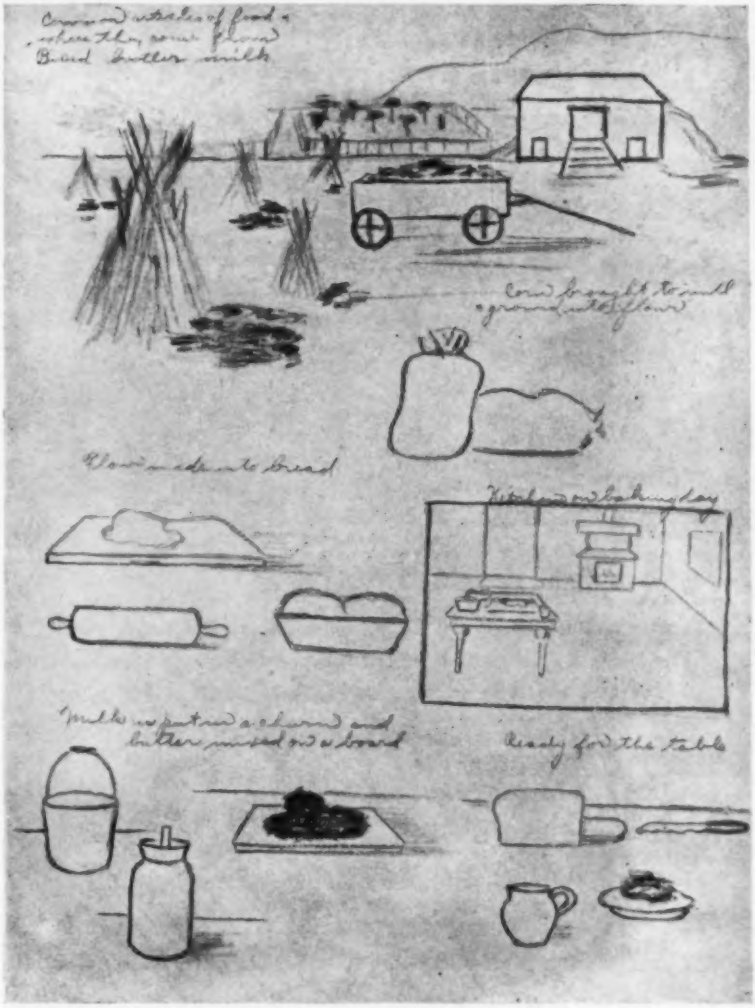


Plate VI. Common articles of food. Pencil drawings by Mollie McInerny.

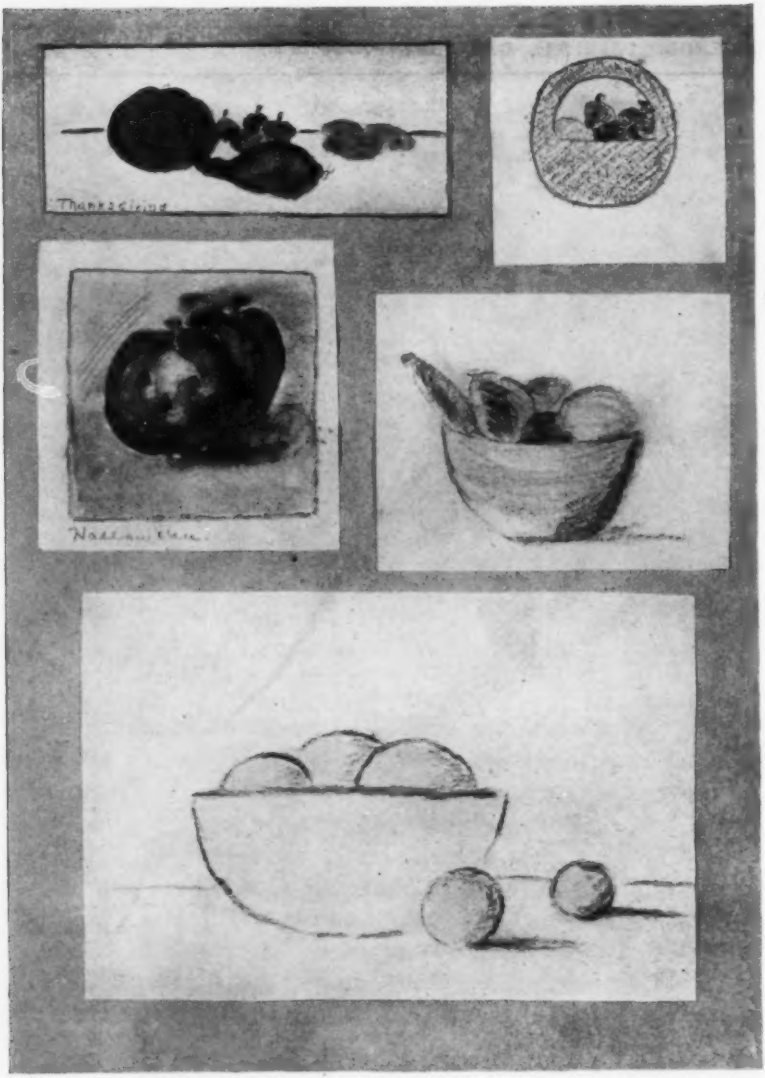


Plate VII. Pictorial or decorative groups of vegetables illustrating special occasions.

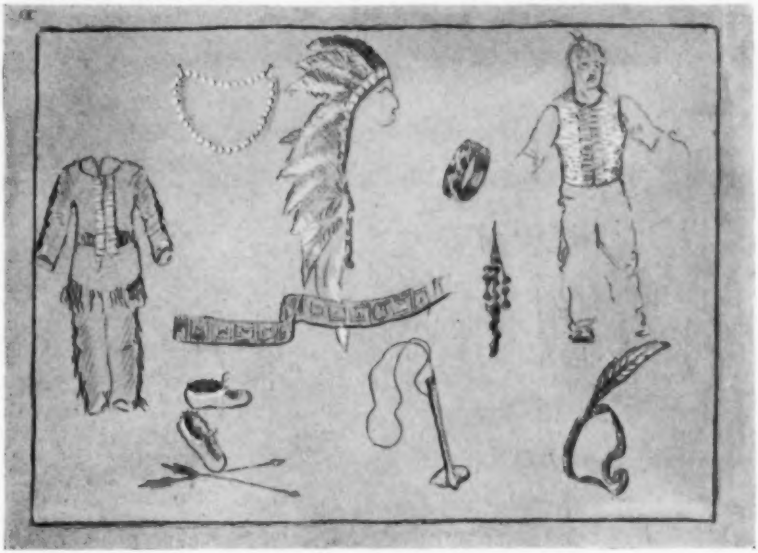


Plate VIII. Sketches illustrating Indian clothing, by Miss Lucy S. Ward.

VII the arrangement of fruits and vegetables in a pictorial or decorative way can be related to specific occasions such as Thanksgiving, Hallowe'en, etc. These lessons can be handled easily with crayon and pencil.

Plates VIII, IX, X, and XI suggest the subject of clothing, both primitive and modern, which can be studied with a view to gaining expression of facts concerning preparation of materials, and simple processes in the making of garments, as well as the sources from which materials, such as cotton, flax, and wool, are obtained.

We recognize design as one of the strongest points in all this training, second only to knowledge of facts used as a basis. Design also is one of the best ways of teaching art in

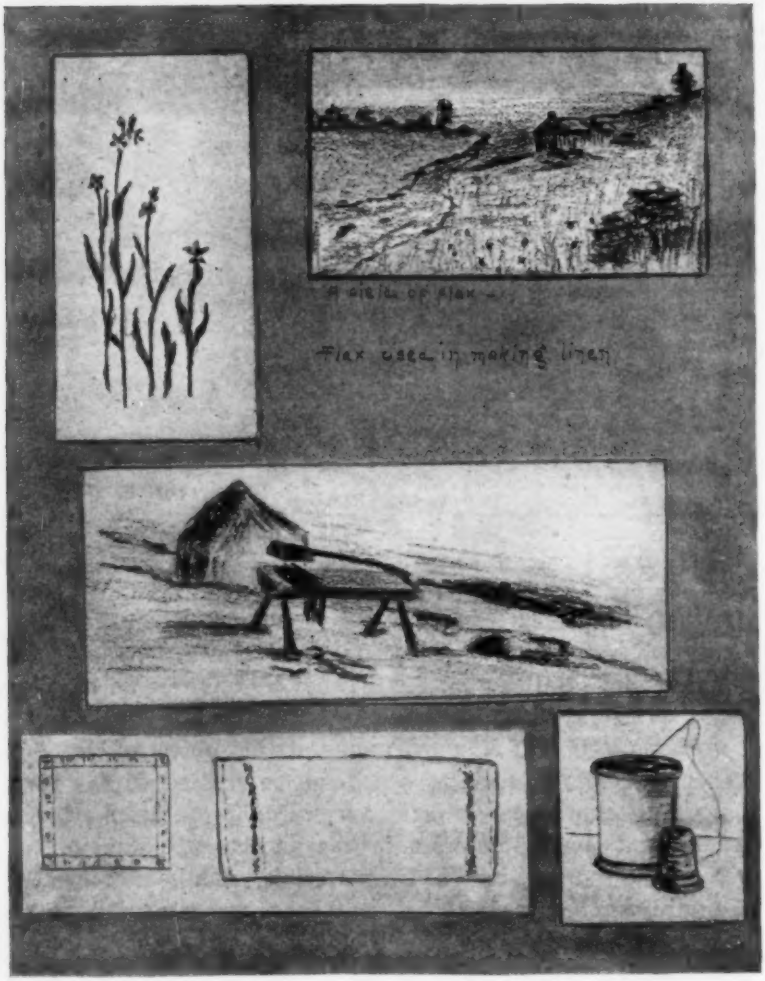


Plate IX. Sketches illustrating the sources of clothing. Flax.

Plate X. Sketches illustrating the sources of clothing. Wool.

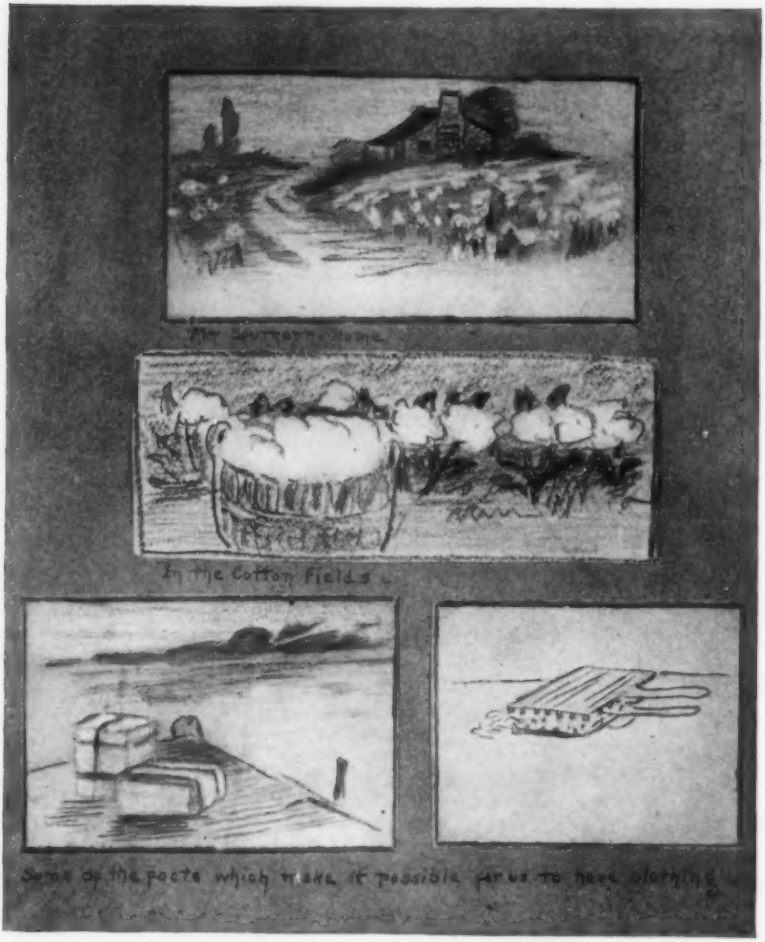


Plate XI. Sketches illustrating the sources of clothing. Cotton.

relation to crafts in the upper grades and high school, for the principles involved are the foundation of the best there is in art.

Drawing should not be an end in itself, but surely should mean in all school work knowledge gained thru the pleasure of self-expression.

MARY B. HYDE
Pratt Institute
Brooklyn, New York

CREATIVE MODEL DRAWING

THE simplest decoration which a child has built from measures of his own planning, is of more value to civilization than the most perfect drawing any artist ever made of the Parthenon frieze. One well made model, type form, — the creative effort of a child, — stands to exert far more change on the face of the world than all the drawings that have ever been made of that particular type form since the invention of perspective.

The one is a life germ of infinite possibility, — is concrete thinking, outspreading, effective in its future. The other represents the appearance of a moment, often of a chance, and is arrested development. It is of value to the former when it reviews, or still more firmly fixes the concrete idea already expressed in terms of three dimensions. Most inventors work, and think concretely in three dimensions, over the model expressing their idea. It is almost safe to guess that half of them hire some draftsman to make the patent office drawing. While they are not helpless so, it would perhaps be better in explaining their ideas to others to be able to do appearance drawing, one form of expression and a short cut for wordy and obscure explanations.

When a pupil is able to grasp and intelligently apply a few geometrical principles on which his model forms are built, his reason ought to be sufficiently developed to do thoughtful drawing of appearance. It is highly essential that each pupil have his own model, — in a near uniform relation to his eye, — for successful class work. In order to do this, let him make his own models, to his own proportion judgment. Let him provide for them a model stand, which shall raise them to a convenient level. For all of these models and stand may be quickly and easily made of his standard 9″ x 12″ drawing paper.

A lack we all feel in appearance drawing is the location of any positive vertical or horizontal line on which to register our comparative judgment of edges. We can pretty safely leave slanting lines alone if we carefully enough locate our verticals and correctly space them. In search of a way to lead high school pupils to make these independent judgments, the devices here described were planned.

Two sheets of 9″ x 12″ drawing paper make a model stand of uniform height for desk use. Fold the 9″ edges together and crease. On one sheet mark the creased line on the outside with a clean black line. Tear the other sheet in two on its crease. Fold each of these pieces into a zigzag screen of three wings — 6″ dimension. Stand the two screens together angles opposing at the back of the desk. Drop over this the other sheet, one-half becoming the top, the other, the curtain, of our model stand. The supports are completely hidden. This is strong enough to support all paper models, and even a moderate weight form. The black edge gives us a positive horizontal from which to measure. (See Figure I.) At the left are the three parts of the stand.

Place your drawing sheet with its long edge parallel with the front edge of the desk. The paper edges and the black line of the stand should all be parallel. Now establish a traveling vertical, by standing your ruler, or other straight edge, flush with the back edge of the drawing sheet. A plumb line may be used in testing the perpendicular judgment at first. This ruler slides back and forth covering the verticals as locations and measures are taken.

Fold a one by two sheet into a double square. Open into a 90° corner and place on the model stand, with its corner touching the black or front edge of stand. This presents, in simple form, the same problem as the two faces of a cube.

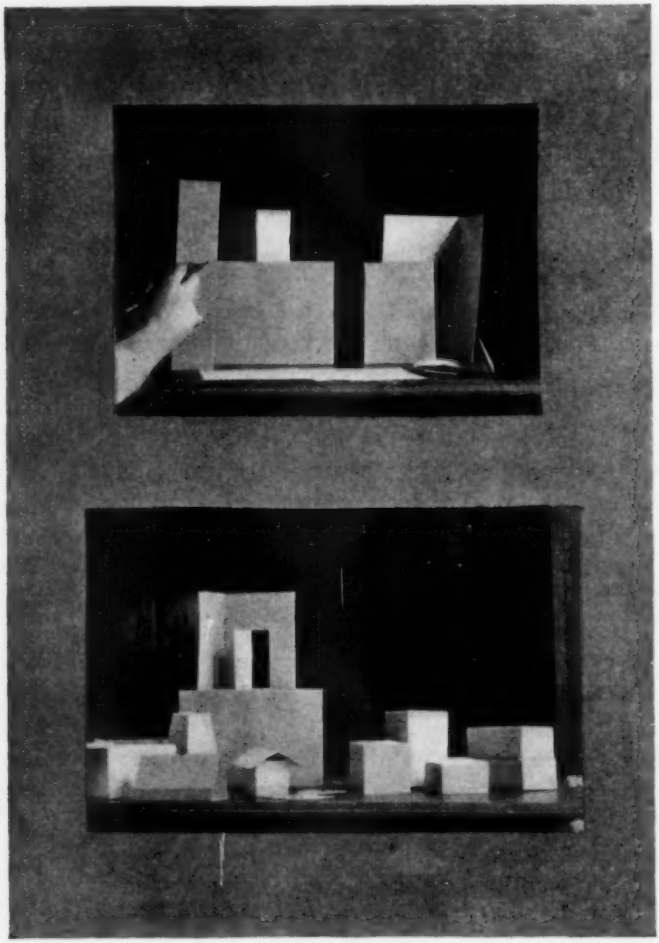
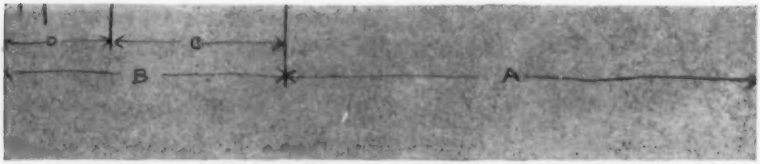


Plate I. Paper models of original proportions, by ninth grade children.

With one eye closed, let your ruler edge, or traveling vertical, cover the fold of the corner. When it does, make a dot on the edge of the drawing page, just at the base of the ruler. You have projected the location of one vertical. Without moving your head, slide your ruler to cover the right vertical of the folder. Locate it as before, shift the ruler back to cover the left vertical. (See Plate I.) [The photo does not show the top of the stand, but you see by the location of the hand that the observer's eye would be high enough to see the top.]

You have three verticals located. Drop vertical lines clear across the drawing sheet, across them run a light horizontal where you wish to begin your drawing. With ruler again in position, measure between your pencil point and finger, the exact apparent length of the vertical edge. Hold your pencil flush with ruler edge. Now, down on your drawing sheet, lay off that exact measure, on its own vertical, up from your light horizontal and line in with a broad gray line. In like manner, measure the entire distance *from the black edge of the stand* to the top of the right and left lines. Locate the distance on each vertical with dots. Next, measure the exact apparent length of these vertical edges, and lay their lengths off, measuring down from the dots just located. This seems easier to do than to get the correct distance back by measuring for the bottom dot first.

When these last verticals are drawn connect their ends, and you will have the proper slant. The success of the experiment depends on keeping your eye, and paper in exactly the same position, with the ruler traveling on the back edge of the drawing paper. When you wish to develop the location of a vanishing point, continue these slants to meet, and so let your pupils *discover* their own horizon, and vanishing points. They can also easily develop the ratio of the greatest possible difference in the length of the vertical edges of a cube.



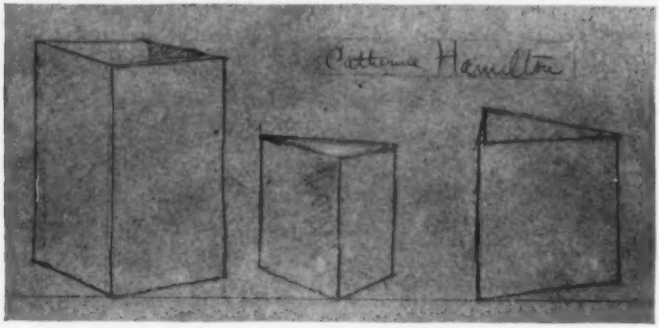


Plate II. 1. A rhythmic ruler made from ordinary drawing paper. 2. Pencil sketches from original models drawn with the aid of the rhythmic ruler.

MAKING THE MODELS

MATERIALS AND TOOLS

Several sheets of 9″ x 12″ drawing paper. Some pins. Scissors.

PRINCIPLES GIVEN

Squaring from a straight edge by exact folds.
Describing a circumference.
Centering by diagonals and diameters by fold.
Plumb line and level.

PROBLEMS

I. Model stand, cover and supports.

A. Fold one sheet of 9″ x 12″ gray paper on its 9″ diameter.

B. Fold another sheet in same manner, crease and tear in two. Fold each of these pieces on the six-inch dimension, reverse fold to stand like a screen whose center panel is slightly larger than the ends.

C. Stand screens, angles opposing angles. Drop over them the

gray sheet, one-half of which becomes the top and the other half the front curtain of stand. This stand will support any paper or pasteboard model, and even light-weight objects.

II. Proportion Scale, 12″ length, on whose measures all the models may be planned as proportions instead of measurements. (Rhythmic Ruler, Plate II.)

A. Take 12″ strips of paper. Touch pencil point at about 5/8″ of its edge. Fold squarely at this point, and on the crease so made record the primary division by a line more than one-half way across. This makes two proportions, A and B.

B. Subdivide B (the short end) in same manner. This gives two smaller proportions C and D. C is the greater.

C. Proof. A=about 7.4″. B the remainder. C=about 2.8″. D the lesser.

Before beginning construction teach pupils to make individual "try squares" or 45° triangles. From a given point on one edge of the paper, fold the edge exactly on itself and crease together. The resulting crease is perpendicular to the edge, and each corner at right and left is a square or 90° corner. Label the corners before dividing. Then cut or tear on the crease. Measure the largest equal distance possible out on each edge of square corner. Connect these points with a line or fold, and cut off the finished triangle. Use this to find a square corner on the drawing sheet. (Unfortunately many packages of school paper are not cut true.)

III. The Models (using common units).

A. Planes.

1. The square: measure from a square corner the distance "C." (2.8″) on each edge. Square by exact creases from these two points and tear out.

2. The Golden or Greek Oblong.

a. Dimension "B" by "C."

B. Approach to solids.

1. Double or hinged square for study of square corner outside or inside.

2. Four-hinged squares with flap added, give the law of the cube.

3. Four-hinged Greek oblongs with flap added give a model square prism.

4. Equiangular prism; made from square prism by folding in one face.

In like manner any right line models may be quickly made. Keep to some standard set of dimensions so all your models are related. It is rather better, I believe, to have a ratio that is an art relation than a mere arithmetical repeat. Almost any

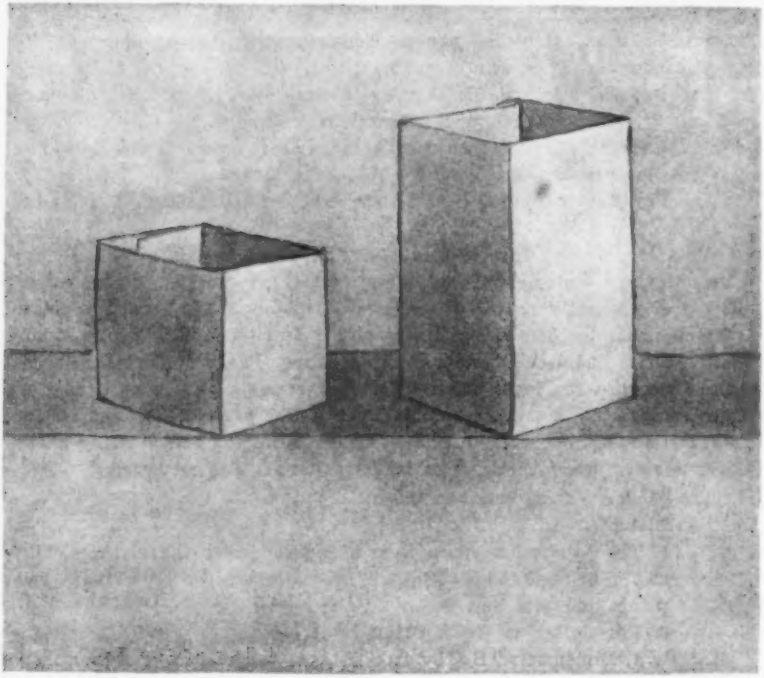


Plate III. Pencil drawings with added washes of water color, from original models. The drawing and spacing of the sheet worked out without the teacher's assistance. First year in high school.

problem one meets in perspective can be planned on top of our model stand. The curve and lay of a road can be drawn as a plan on the sheet, and presents at close and measurable distance what we need to learn of the approach of curves.

Every fact of these typical forms can be taught from these skeleton models. Keep them constantly related in proportion. It is just as easy, if not easier, to use an art relation in planning your proportions as to laboriously lay off inch dimensions. For the sphere and other curvilinear forms, many light objects can be secured.

If the box form hollow models shown at the right of the lower illustration, Plate I, are desired, those shown can be easily constructed by fifth grade pupils and represent the following dimensions on the 12" scale.

Cube, C x C x C.
Square Prism, B x C x C.
Square Plinth, D x C x C.
Box Form, D x C x B.
Long Box, D x C x A.

Each, of course, is a problem of length, width and depth. The pattern in squared folds calls for a depth, width, depth, width, depth, five measures. Across these measures square a depth, a *length* and a depth. Slashed in on each fold, *one depth* on each five-division edge, gives you a form which folds in to the dimensions given. If tied instead of pasted they are more easily put away for future use.

The illustrations sent of pupils' work are from an average first year group of high school pupils. Their first efforts, secured before we tried the devices given, were the usual *average* results that discourage us so. In two weeks, daily work, the results shown were secured. The pupils had made their own models in that same period. The wash drawings with one exception are self-corrected. This was given as a test at the last lesson. The cube and prism together had been done before this. By self-correction I mean that I neither approved or disapproved. In the other drawings where I criticized I merely asked them to remeasure certain dimensions.

There are errors in all, but at least to me the results were

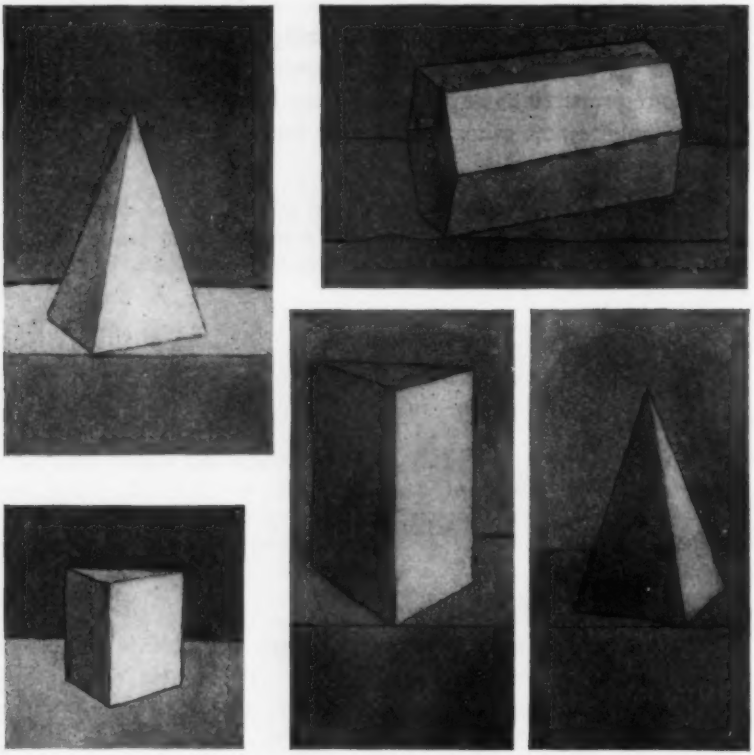


Plate IV. Pencil drawings with washes of color from original models. The arrangement of the sheet is also original, (or was before the sheets were slightly trimmed in the making up of the plate). First year high school pupils.

more comforting than at any previous time, and I believe the pupils were more interested in this exact way of working.

We passed from the model to leaf form in various positions. As we leave the models close at hand in all sketching, I shall

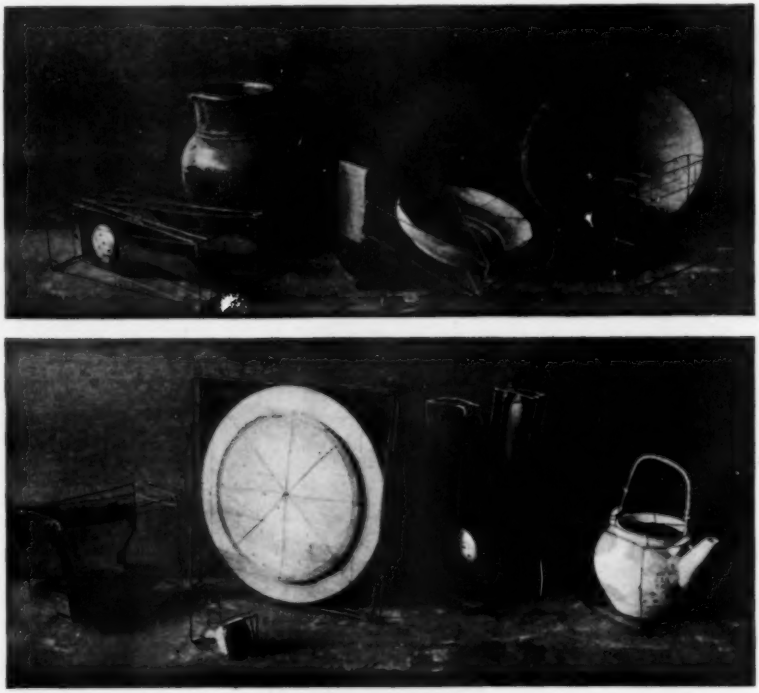
ask them to take all measures at the back of paper still, but, in proportion instead of exact dimension, as the distance diminishes the measure.

If you find these notes of any aid thank the spirit of The School Arts Book, who set me, against my will, to study the subject,— probably because he thought I needed it. At least I thank him because I have found pleasure at last in drawing models, confessing that I was a confirmed skeptic. Besides we have our models which I hope have been so related to forms about them in comparison — that the proportions at least will stay — as a standard of judgment to any pupil whose work may later be in the concrete.

CHARLOTTE REED
Ontario, California

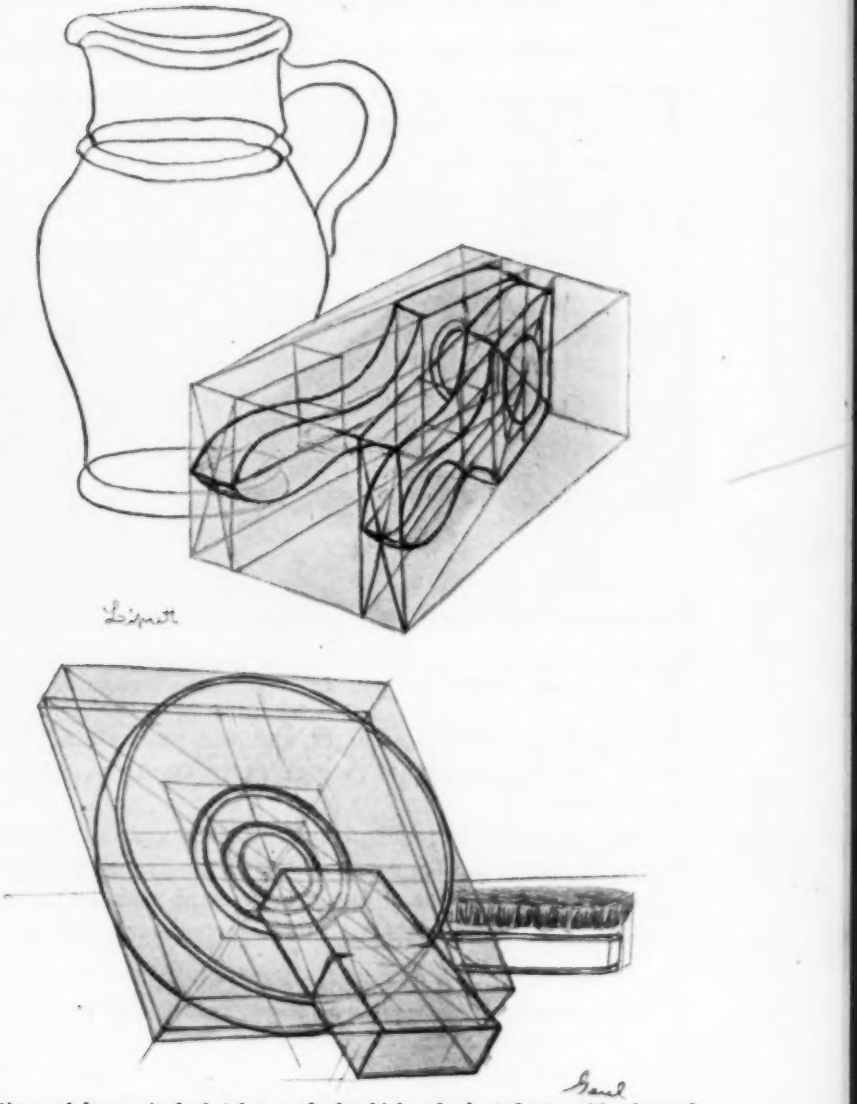
MODEL CONSTRUCTION LINES

Students who are deficient in imaging power often have difficulty in applying that which they have learned thru blackboard instruction of the relation of irregular objects to the geometric solids and of the relation of axes and invisible edges to the visible portions of objects. The



Photographs from models supplied with wire frames embodying useful construction lines

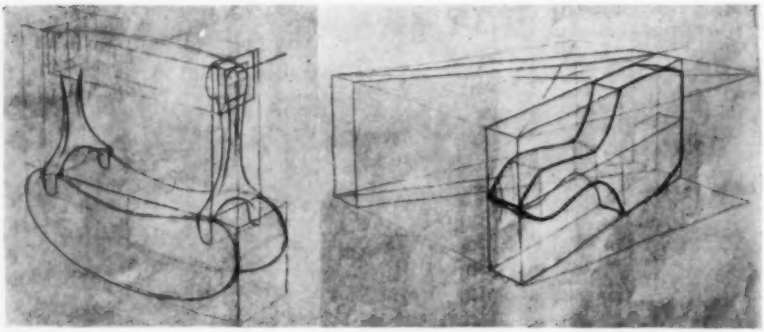
following brief article sets forth a device invented by Mr. Bradley to assist in the teaching of perspective drawing in a manual training high school. Mr. Charles C. Heyl, head of the Department of Art, in that school, has expressed his approval of this method, "for," he says "it is justified by results." — The Editor.



Reductions of large sized sketches made by high school students with charcoal on charcoal paper from models provided with wire construction lines.

THE Department of Art of the Southern Manual Training High School, Philadelphia, employs wire frames, constructed to fit the drawing models, for the purpose of aiding the work in freehand perspective. The method has proved itself to be possessed of much value.

The frames are made of copper wire, the insulated variety



Sketches by high school students from models provided with wire construction lines, showing the method of starting the drawing.

being used for the major lines and the uninsulated for the minor. In fastening the various parts together a fine iron wire is used.

The photographs and drawings show at a glance the method of using the frames. At times the frame encloses the object, — at other times it is simply placed near by in a parallel position. Both methods have proven very successful.

WALTER COOPER BRADLEY
Instructor in Drawing, Southern Manual Training High School
Philadelphia

DRAWING FOR A SCHOOL ANNUAL

ALMOST every secondary school issues a year book of some kind. Our school has been publishing an annual for the past six years. Its growth in volume has been rapid.

In order to appreciate more fully the work described in this article, a few words of explanation are necessary as to the book's arrangement. Aside from the various school and society activities described in our annual, it is customary for the boys of each class-room to edit, in their own fashion, a page for that class. No one idea predominated in the printing of these. It was not uncommon for an embryo designer, whose willingness and ambition far exceeded his ability, to draw some picture or border, within which the subject-matter of his class was printed. As there were nearly fifty classes, and almost as many pages edited by the pupils, the appearance of that part of the book was incongruous in the extreme.

Until last year the business part of the publication, as well as the selection of drawings for the book, were in the hands of an energetic, up-to-date business man, who always carried out the financial end of the work with success. Unfortunately the artistic make-up of the Annual was far from any expected standard. Nor was this surprising. Any class that paid for a cut could have a drawing reproduced on its page. The business manager looked after that.

This year the writer was asked to help the Board of Editors, in the hope of improving the beauty of the book. It occurred to me that here was an excellent opportunity of arousing more interest in the Annual as a school publication, as well as greater enthusiasm among those who worked in the art department. Here was something that would appeal to most pupils. The idea was presented to the other teachers, who agreed to help in the work. It was planned to have the pupils of each class make a border design within which to enclose

the subject-matter they chose to edit. Here was a problem to bring out the best work the boy was capable of; for who does not like to see his drawing in print? Here was an opportunity for the teacher to apply the idea of beauty to something useful and practical.

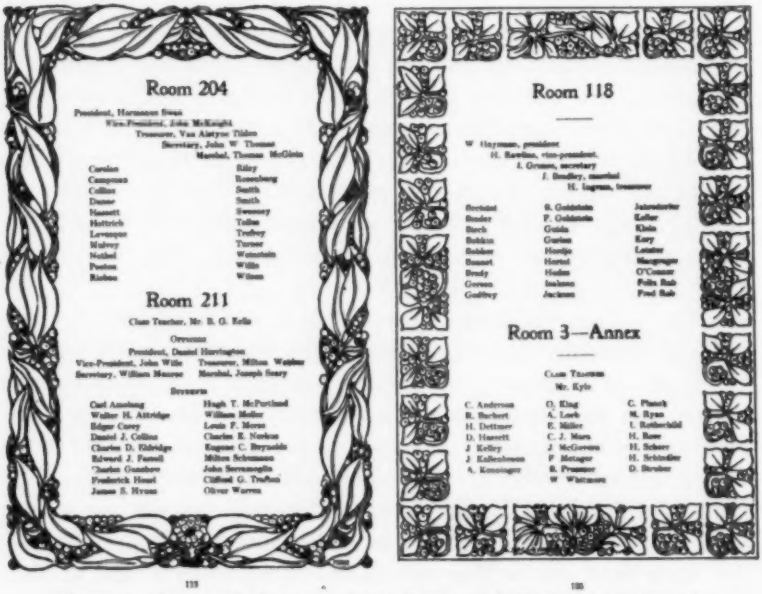


Figure 1. Two typical pages of the Commercial High School Annual

Now as to the methods in carrying out these designs: While uniformity of size and shape had to be maintained, to get unity in the arrangement of the pages, variety and interest were to be obtained thru the choice of different motives and treatments. Flower, fruit, and berry forms were chosen for this purpose. These were drawn naturalistically upon large

cards about twenty-two by thirty inches, so as to be plainly seen from various parts of the room.

The nature and purpose of the problem were outlined, and each class was asked to choose a motive from the large cards. A good deal of interest was aroused in the selection of these.

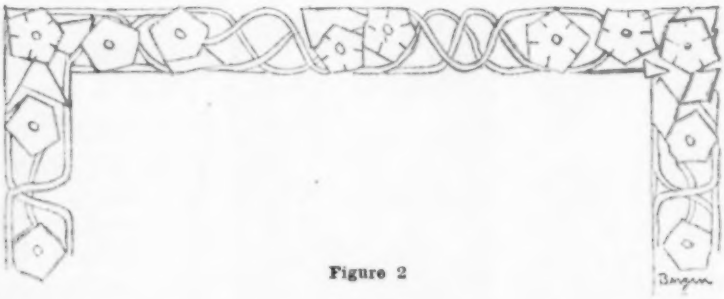


Figure 2

Where two classes voted to use the same motive, the designs were treated in different ways. Figure 1 shows the results of two such treatments based on the leaf and berry.

The ideas of conventionalization were briefly presented, showing, by means of examples, various possibilities in the modification of the natural form. For our purpose, no high degree of conventionalization was necessary. The design being rectangular in character, the importance of supporting the sides and angles was emphasized. Examples were given showing the application of this principle of structure.

Then the design was begun by planning various masses within the rectangle. No detail was to be put in, till the entire idea was planned out. Thus, in the case where the grape and leaf were used, the space was divided into minor masses of fruit and leaves connected by stems. Figure 2 illustrates this step. There were of course difficulties in the approach to the problem,

particularly in the proper planning. To help the pupils, mounted sheets of illustrative matter were put up. The examples were obtained from magazines and various other sources. (Figure 3.) It is wonderful how such material will help a boy in times of discouragement. When he feels incapable of doing another line, he is told to spend five minutes at the exhibition

Figure 3. Examples of suggestive material given to the pupils to promote good design

board to see how well others have solved difficulties similar to his own. Instead of laboring with arrested ideas, he again goes to work with a new channel of inspiration opened.

In the division of the space into masses it was found that the structure of the designs in many beginnings was weak. The inserted divisions did not properly fill out the original space. In such cases the pupil was asked to erase the inside and outside rectangles, and to see if the form still kept its rectangular character. If it did not, then the spaces were not properly planned and the design did not fulfil the original require-

ments. The correction of these errors put the first part of the work into successful shape.

The next steps were the introduction of details and the refinement of their lines. Here it was pointed out the conventionalization did not consist in making caricatures of Nature's beauty. It was rather a matter of seizing the vital elements of the flower or leaf, and using these for beautifying the design. For example, grapes could not be made by drawing many tangent circles. They had certain shapes and relations in their natural growth, and it was essential to maintain the character of these in some form or other in any conventionalization. The large lines of the drawings on the charts were analyzed, showing how they could be treated in the design. Boys were asked to pick outlines of beauty from some flower. Figure 4 shows a chart prepared to show detailed treatment of stems and fruit.

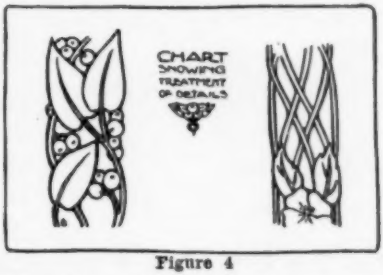


Figure 4

The drawings were now transferred to another paper for the pen work. In most cases the design was symmetrical, so that only one-half was planned and completed, and direct and reverse tracings of it made. The method is too well known to require description.

Before beginning the pen drawing, the nature of a zinc line-cut was explained, and some examples of last year's work were shown. Weak lines reproduce poorly on the cut and break in the process of printing. Therefore lines of strength as well as of beauty were required for successful results. The designer's device of rounding outside angles so as to produce

pleasing spaces between the masses was illustrated on a chart. Practice in pen work was given, and the border finished. Care had to be exercised, because even a single poor line would show in the reproduction. Painstaking effort was one of the good results of a problem of this type. A spirit of healthy competition was shown in the way pupils compared their designs.

Figure 5

It took from eight to ten forty-five minute periods to complete the border. Those who finished ahead of the others were assigned to make tail-pieces for the pages of the Annual. The motives and treatment were similar to those of the major problem. It was again a case of choosing a definite shape, its divisions into minor masses, the introduction of details, and the refinement of lines. Figure 5 shows two of the results.

The four or five best borders of each class were now put on exhibition. Naturally those who worked on the problem were anxious to see and discuss what the boys of other rooms had done, so that almost every pupil saw the exhibit. The teachers, too, came and spoke words of encouragement. A committee of judges, composed of members of the Art Department, selected the best design for each room. Forty-four of these were reproduced. It is easy to conceive how much more the Annual meant to the boys this year. Some of the good borders are shown in Figure 6.

The head-pieces for the different activities in the institution were made by a dozen of the best workers in school, mostly members of the Sketch Club. The symbolic significance of a

Room 203

H. L. Rosenwasser
Class Teacher

Mr. Loveland	Mr. Peacock
" Shoreberg	" Scarborough
" Connon	" Campbell
" Carey	" Zeiner
" Greenberg	" Denenholz

Pupils

B. Hughes, President.
J. Collins, Secretary.
J. Jacobson, Vice-President.
F. Gerald, Treasurer
A. Peterson, Marshal.

Craig, J	Jaeger, H.
Duffy, H.	Joerger, A.
Fox, M.	Kinstarr, R.
Fraser, A.	Knowake, F.
Frost, R.	Kroeck, F.
Frush, C.	Levine, N.
Greenhalgh, A.	Lampe, I.
Gardner, A.	Lawrence, R.
Gordon, A.	Le Roy, W.
Hill, C.	Marsden, A.
Herr, C.	Mehlman, T.
Hartley, A.	Spiller, F.
Hossler, C.	Wallach, B.

Room 116

Teachers

Mr. Percival Rappaport—Four in our week.
" Wilhelm—"Tell it to the marines."
" Campbell—"Empty barrels make most noise."
" Van Houten—"Bring in four cubs."
" O'Ryan—"What lesson did I assign?"
" Dublin—"My patience won't last."
" Denenholz—"Where's your four cents."
" Walsh—"Let me see your ledger."
" Scarborough—Close your mouth, I feel a draught."
" Greenberg—"Don't stand any pencils."
" Zeiner—Easy life, and he knows it.
" Brown—I'll bet he is classy.

Barney Bass Team

Class Members

Abbott	Dwyer	Gold
Abrams	Ehrlich	Goldstein
Andreany	Esposito	Graves
Bendix	Fagelson	Kearney
Berger	Field	Leonhardt
Bienstock	Fuller	McCarthy
Clarkin	Frenkel	Nolan
Cohen	Garvey	O'Connor
Coffin	Geiger	Pellettieri
Colgar	Goldsteur	Wagner
Curran	Gorman	

Room 304

Class Teacher
Mr. Remy

(Indirect Discourse)

Bastedo—Violates our regulations by studying.
Bosworth—She eats algebra.
Carey—The board rubber thrower, very good shot.
Clayton, H. (also Lizzie)—She loves banana cake.
Clayton, W.—In favor of woman suffrage.
Cullen—Who swiped my lunch?
Du Bois—He ate Dr. Cook's grandpops.
Doyle—Nick Carter the great.
Fletcher—Tell it to the King of Denmark.
Harris—The boy with the blond hair, he's awfully cute.
Heilmann—The Jayman.
Irvin—Signals 20-70-100, Coach, much got off my neck!
Jackson—I'm going straight home and tell my mother.
James—Want to buy a ticket for an Irish Wake.
Knoll—Take your hands out of my pocket, I'm no bank.
Kohen—Wake me up when school's out.
Ehrig—Just shaved my shoes.
Lerner—He's there with the Dutch.
Magee—From Richmond Hill, never overlook, never will.
Matthews—Two left feet.
Mekelatos—Mamma's little bouncing baby boy.
Nore—Conrad II the great.
Rothner—Sons of Rest (?
Rolle—Who trowed dat brick?
Sherman—This is no place for a minister's son.
Sheppard—"Want to sign for the Ledger?"
Sawyn—Discovered Dr. Cook (?!?)
Treiner—With the marvel wave.
Walsh—"Sit down, you're rocking the boat."

Room 207

Teachers

Mr. Shea—Million Dollar Kid.
Dr. Semple—"Cook Up."
Mr. Loveland—"Lay aside your Material."
" Remy—"Exceptions None."
Dr. Rose—"Put down your pen."
Mr. Connors—"None ye !!"
" Peterlin—"Shut your yaps."
" Greenberg—"I'm talking, boys."
" Brown—"Attention ! !"
" Seaborn—"That's advertising."
" Zeiner—Groucho the Monk.
" Rose—"Get that movement."

Idols of a Queen

Cast of Players

King Arthur	Schmidt (pres.)
Queen G'Vinaque	O'Brien (v. pres.)
Sir Lancelaud	Rothstein
Slime of Ask-a-lot	Walters
Pr. Gareth	Pasquale
Lionel	Weeks
Sir. Khay	Testa
Dutch Shoes, saved by Gareth	Miller (treas.)
Baldwin	Mayhoney (asst.)
Bedwillier	Chamberlain
A Wounded Champion	Gruber
A Skinny Man, in King Arthur's Court	Cohen
A Juggler " " "	Rothstein
A Wrestler " " "	Schmidt
A King's Jester	Pasquale
Merlaus, a Magician	Fried
Tweetius	Leland
Dandred { sisters	Rosenthal
G'Wine { sisters	Bernstein
Lurline { sisters	Walkowitz
Larry { sisters	Wolkenstein
Faith	John S.
Hope { Queens	Rudwig
Charity	Helig
Rummy	Fried
Rummond { Grimy Kitchen Knaves	Lewis
Kid	Cardozo

Figure 6. Four typical borders, the work of high school pupils

head-piece was pointed out, and a large collection of illustrative material looked over. The boys were asked to submit ideas in pencil. These were criticized and completed. Figure 7. The design for the cover, Figure 8, by a first year pupil,

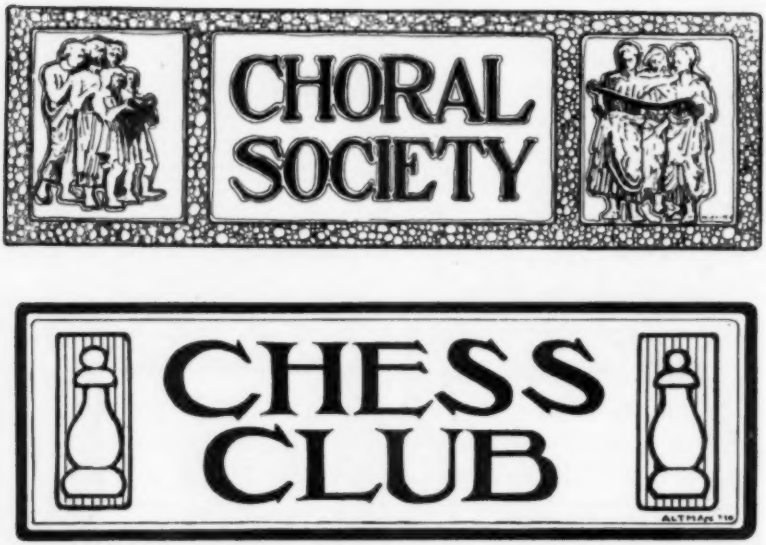


Fig. 7. Chapter headings designed and drawn by high school pupils.

is based upon a decorative drawing of a lamp made by him. This lamp is located at the entrance of our building. Here was an instance of an excellent motive furnished by the school itself.

The photographs that appeared in the Annual were mostly made by members of the Camera Club. It was attempted to have these more pleasingly arranged than formerly, by the introduction of a narrow border, so as to relate the picture to the page. Where several single photos were mounted on one

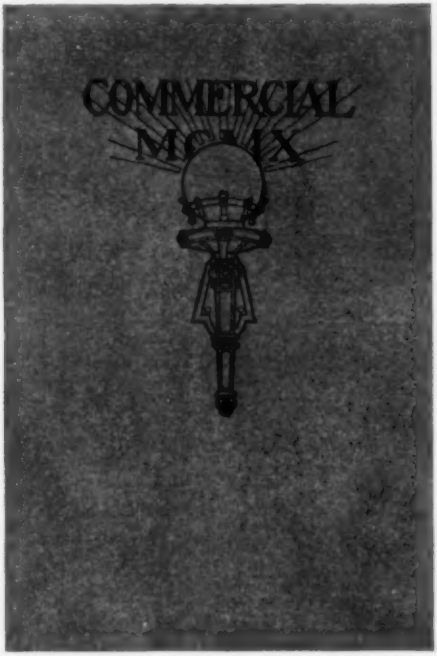


Fig. 8. Cover design for a High School Annual by a first year pupil ; motive, the lamp at the entrance of the Commercial High School building, Brooklyn.

sheet, no fancy swirly lines were drawn about these. The simplest kind of arrangement was used. (Figure 9.)

Let us consider some of the results in this effort. The least important one, perhaps, but still significant of interest aroused, was the fact that the sale of the book was increased by four hundred copies. Far more important was the opportunity presented, of having a live application of the principles of design to a practical problem; the production of a piece of work actually used for beautifying the pages of a book.

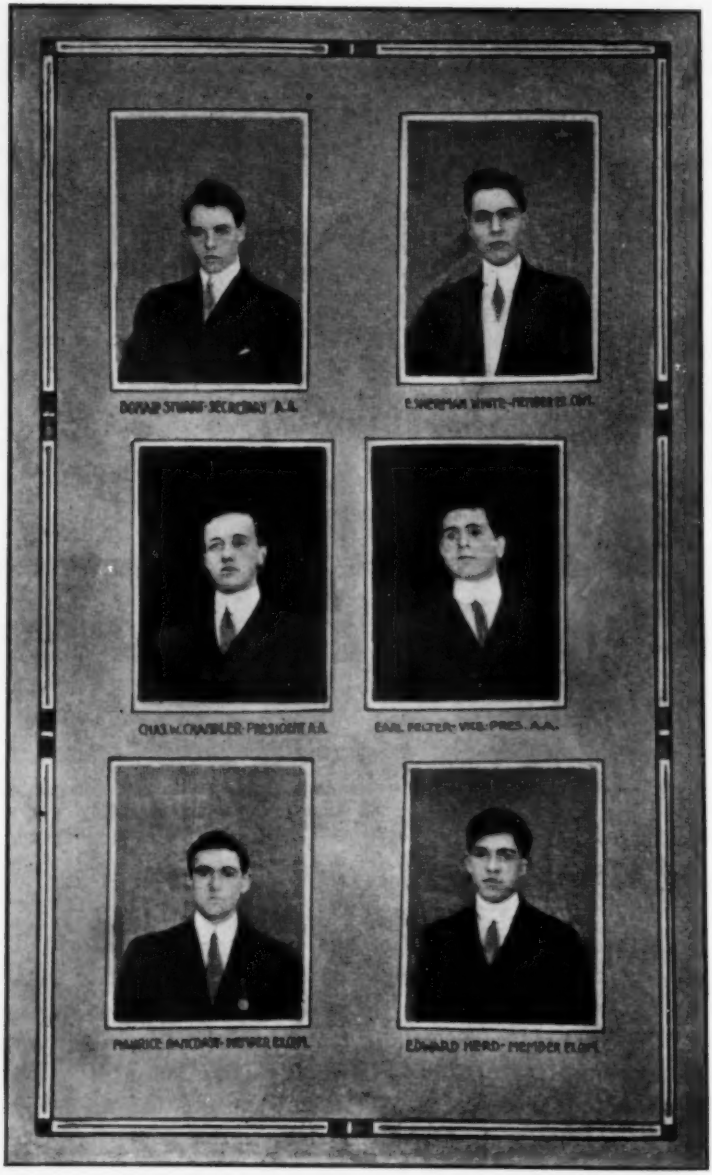


Fig. 9. One of the portrait pages in the Commercial High School Annual showing an orderly arrangement of photographs with simple and effective decoration.

The result in another direction was equally valuable. A well printed book, a cover design, a drawing in a magazine — all these now mean more to the boys. They notice pleasing and beautiful work where they never did before. A new avenue had been opened for them, toward one more source of enjoyment in life. After all, can we teach drawing with a better ideal than this one?

MORRIS GREENBERG
Commercial High School
Brooklyn, New York

THE MENTAL EQUIPMENT FOR OBJECT DRAWING

THE "drawrin' lady" had been giving a little talk to the children on landscape painting and picture study. She had told them about sunsets and had even painted one or two for the class. Then wishing them success in their attempts she went on to the next room. Immediately the boy in the front seat showed by the usual signal of distress that he must speak.

"Well?"

"Say, she gave the whole thing away, didn't she?"

It is with a sincere desire to "give the whole thing away" in regard to object drawing that this paper is written. Of course the aims of art education in the public schools are manifold, but there is a growing desire on the part of all concerned that among the many results to the child there should be a certain ability to really draw. People in all walks of life ought to be equipped with a sort of graphic Esperanto, ready at any moment to express an idea of shape, proportion or direction. Citizens of an enlightened community should use lines almost as freely as they use gestures to describe things. A line is only a gesture traced on a surface. The ever ready lead pencil, our common tool, is a most willing servant, but alas it is confined all too closely to the humdrum work of writing merely words when it would readily make lines to describe things more fully.

The statement, often heard, that "any one who really sees can draw," is true only in part. There are tricks to the trade, not only artistic, but scientific, which one needs to know before he can represent the various positions of even a simple object. Perhaps the claim is two-thirds true. Any seeing person can, with a little practice, picture a flat object or one face of a solid. This shows two of its three dimensions. He can show shape, proportion, and interesting details. This involves ob-

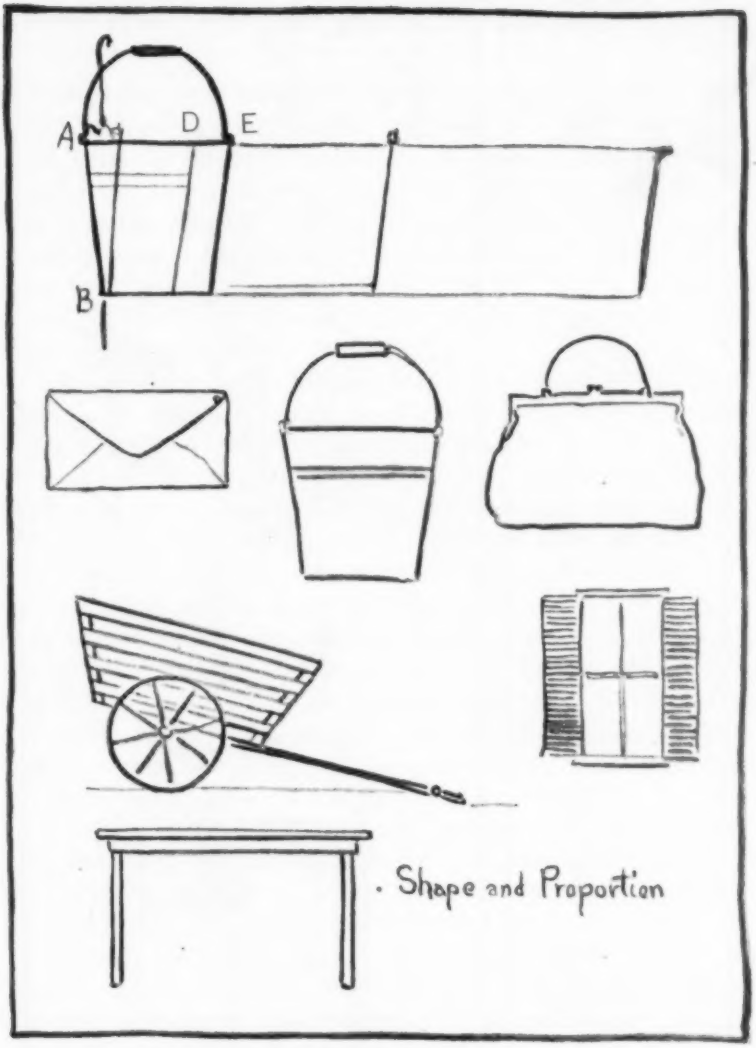


Plate I.

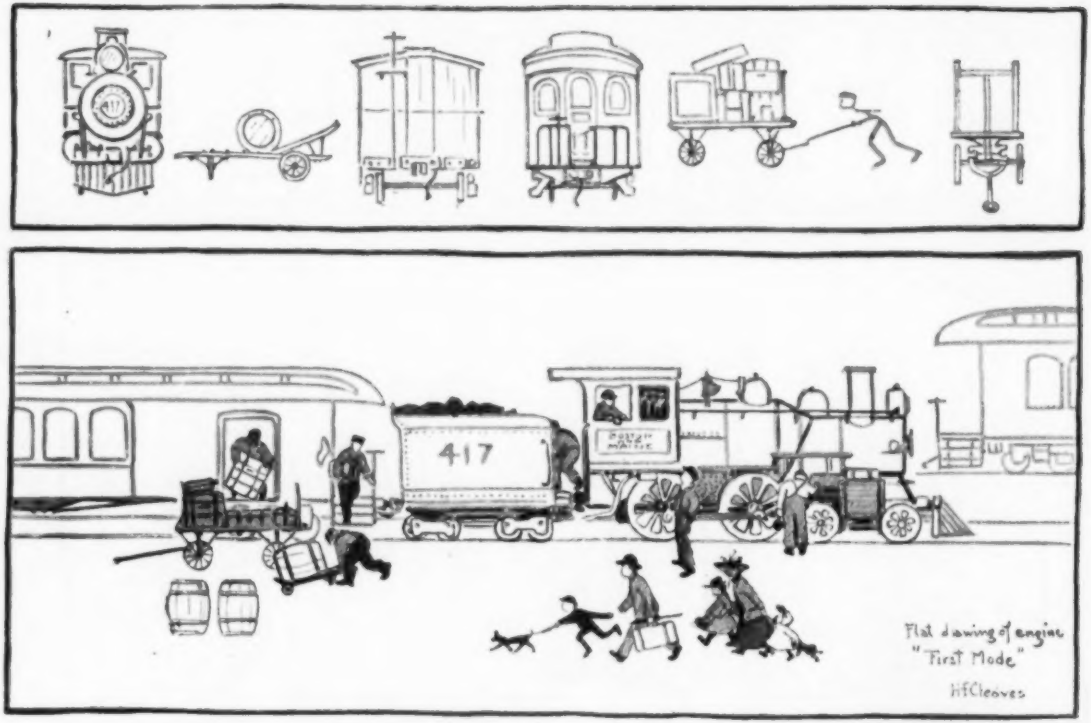


Plate II

servation, but no science of perspective or artistic "technique." This plain statement of facts, despised by many artists, is most valuable in the practical life of shop or market. It is the basis of all working drawings from the simple explanatory sketch to the detailed drawing of architecture. As a language it helps instead of hindering expression and it can generally keep pace with one's knowledge of facts. This mode seems obviously the proper foundation for all drawing, the first and most important part of the training.

Before touching on perspective, "the science of the large and the small, the near and the far," let us consider carefully the process of making the simplest possible flat drawing of such an easy thing as a child's sand pail. Given a pencil and paper I focus my attention on the shape of the object, either a real pail or one remembered. In making even the simplest line I have three things to consider. First, where to begin; second, which way to go; third, where to stop; position, direction, and measure. Placing my pencil point at A (Plate I), I decide the beginning, moving down and slightly to the right I eliminate a thousand other possible directions and follow the one which suggests the slant of one side of the pail. When I stop at B the size of my drawing is settled. This matter of size is governed not so much by the pail itself as by the relative position of the object, the paper and the eye. An arbitrary dictation as to the size of drawing may add unnecessarily to the difficulties. If a large drawing is desired bring the object near and hold the paper as far from the eye as convenient.

Now having drawn one side of the dish, AB, my next problem is to place the other side. This is so important that I feel my way very carefully. If I draw the line at C I get the proportions of an umbrella, at D a tumbler, at E the position of the line seems right. If I go on I get a tub or even a shallow

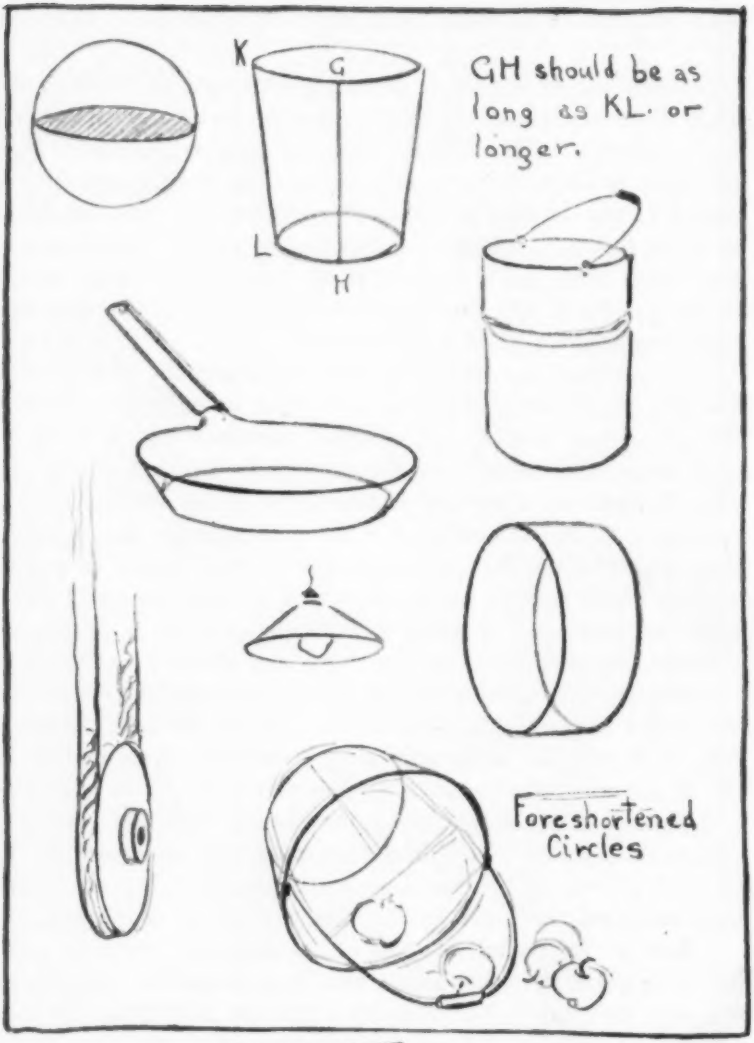

K
G
L
H
GH should be as long as KL. or longer.
Foreshortened Circles

Plate III

pan. These two lines are my chief concern. It is easy to add a straight line for top and bottom and then I am rewarded by the joy of putting on handle, stripes, and other dear little facts. These require the same kind of attention that I gave to the sides, but there is not that uncertainty of starting over an unmarked surface.

It is this kind of drawing which really forces the eye to see and the hand to guide the pencil. The simplicity of the method invites complications in the object, which little children want. The engine in Plate II is all built in this primitive flat mode. The difficulties are not in the drawing, but in the gathering of facts about the engine. The language is simple, but to get the necessary knowledge of a locomotive required several trips to a railroad station.

The tendency to hurry past this simple mode of description seems hardly warranted by the advantages of the more complete representation. Here is the opportunity to practice drawing without complications, to establish a sense of vertical, horizontal and oblique, to learn to judge angles, curves, shapes, and proportions. As soon as the difficulties of perspective are encountered these first considerations, unless they have become a strong habit, will give way to confusion and weakness.

However, this flat drawing will not serve indefinitely. It is often desirable to suggest the thickness of objects and it is here that we must add to our knowledge of objects a few rules of graphic language. There is a mental side to drawing which we have too often left to be discovered and re-discovered during drawing lessons instead of "learning how" once for all. The picturing of a solid object on a flat surface involves a few conventional "tricks of the trade" which we call perspective.

Very little children can draw flat things on a flat surface.

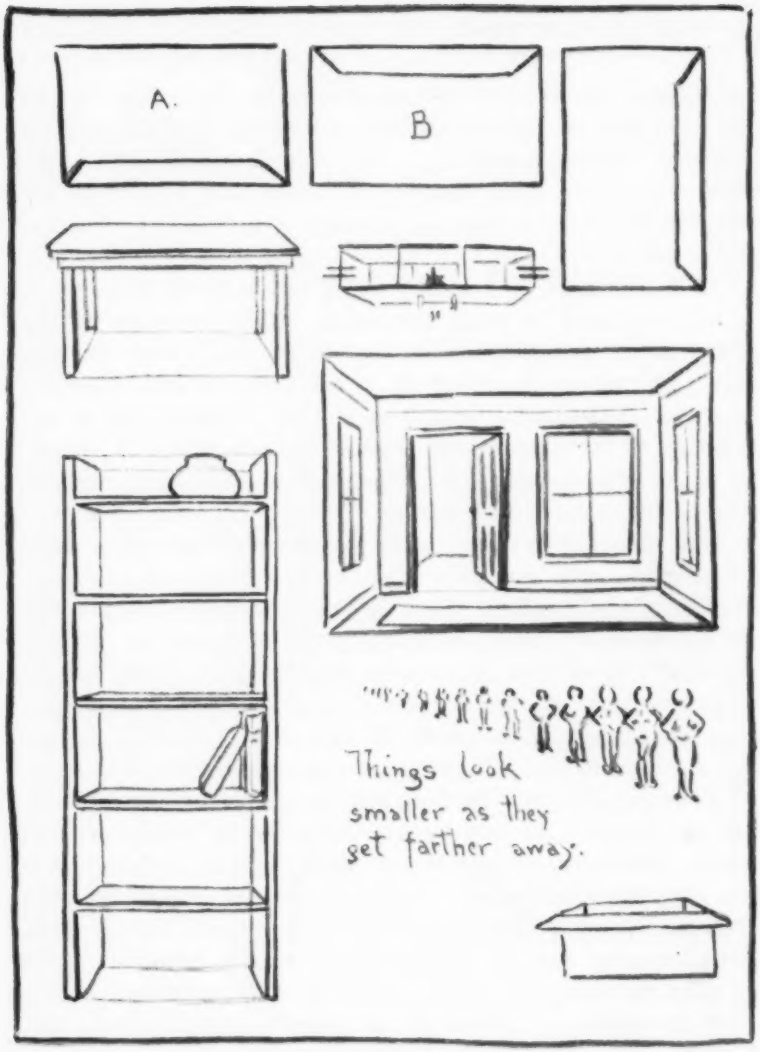


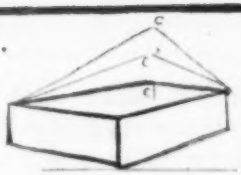
Plate IV

They can make solid things in solid material like clay. They know solid objects by handling them, as do the blind. To draw the sand pail as we have just done requires care and observation, but very little knowledge of drawing, but to show how it looks when you can see into it a bit, as in Plate III, involves the use of perspective. It is easy when you know how and it is our business to see that every one does know how. It is as teachable as any other science or grammar and may be appropriately introduced at about the same place in the school curriculum, i. e., late in the grammar grades and in the high school. Here an appeal to reason is not out of place because the child has begun to think about and analyse things. The danger of introducing the whole subject of perspective too soon is the one to be avoided.

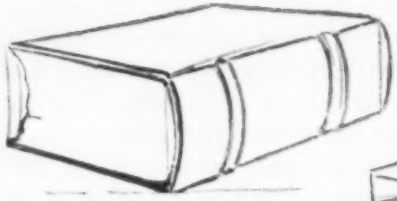
In order to find if possible just where the children could learn to draw foreshortened planes with minimum cost of energy for all concerned, the writer has tried a simple test in the various grammar grades. Each child was given a slip of paper with an oblong door cut in the centre. (Figure I, Plate IV.) The pupils were asked to hold the paper in front of them and open the door back and down until it formed a level shelf seen thru the opening. When asked to draw the shelf in this position all but two or three in the eighth grades drew it correctly with no help from the teacher. In the seventh grades the results were practically the same. In the sixth there was more hesitation and several failed, while in the fifth and fourth only from three to ten children stood the test. The experiment was not tried in the primaries for obvious reasons.

The shortening of the back line is so easily seen when framed by the rectangle that it would seem a fair test of observation. After the drawing was made in the frame, the children were asked to draw just the shelf without the

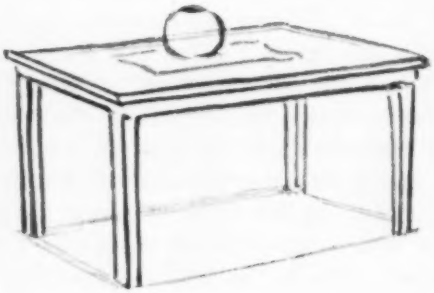
Compare with a horizontal - A.B.



Bring down point c until it "looks right".



The foreshortened rectangle turned.



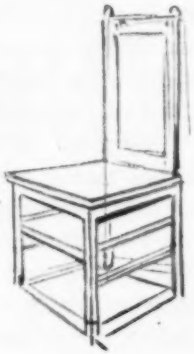
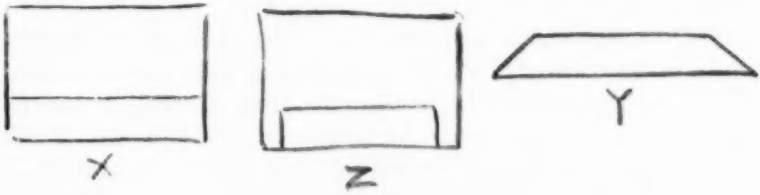


Plate V

frame. Several fourth and fifth grade children remarked that it looked "like the roof of a house," showing that even after seeing the shelf, this picture did not suggest an oblong lying flat but an old, familiar shape. They preferred not to believe their eyes.

It would seem from these experiments that the average sixth grade might mark the place to begin the simplest problems in parallel perspective. Plate III might come in the fifth. If up to this grade the children were carefully drilled in drawing flat shapes as distinguished from solids, their appreciation



of solidity coming first, as it should, from modeling and actual tactile experiences, then the mental process of translating the round to the flat could be taught readily and with much more lasting results. If in the seventh grade forty out of forty-five children can in ten minutes see for themselves the principle illustrated in Plate IV it seems hardly worth while to spend hours in a lower grade working for the same results when the children might be doing things more to their taste and advantage.

It seems generally agreed that the order of increasing difficulty is that suggested by the arrangement of the Plates I to V. Each plate suggests a possible lesson introducing a new principle. First a drawing of the simplest available object illustrating the point, followed by as many applications of the

discovery as time allows, teacher and pupils drawing things from memory on blackboard and paper. This answers the boy's question, "Well, what of it?" If after a lesson like this he goes home and covers a few pieces of wrapping paper with pictures of things in these positions, then the lesson "took" like vaccination. The succeeding lessons can be based on observation, again emphasizing proportion and shape with special attention to the apparent width of the new surface. "How far can you see into it?" is the new question. "How wide?" "How tall?" "Is it curved or straight?" "Where does the line begin, which way does it go, how far?" These old questions we have always with us.

If at the end of the fifth grade the children could draw well, in the manner of Plates I and II, one could guarantee that by direct and practical teaching the time allowed in the remaining three years would be ample to install in the child's mind a good working knowledge of the principles involved in Plates III, IV, and V. The flat drawings need never grow tiresome. The objects may be varied and a bit of color will interest a child far more than foreshortening.

The mental equipment then for object drawing might consist of, first, a broad appreciation of flat shapes gained by flat drawing and of solid forms gained by handling and making solid things; second, a knowledge of the few elementary laws of perspective necessary to express the idea of solidity on a flat surface, to create the illusion which we accept as a picture of a pail or a box.

This result may be secondary to the teaching of good taste and appreciation, but it is none the less greatly to be desired for practical purposes. We could afford to postpone the emphasis on artistic technique in object drawing until the high school period in order to establish the readier use of drawing

as a means of expression. Continual insistence on style and finish at an early age prevents facility and places drawing among the ornaments of life. As such it must remain in the hands of the few who devote their lives to it. To the master it is a means of expressing beauty which the people must be taught to appreciate and enjoy, but drawing must also be willing to "work by the day" and help to express ideas of common life. As a worker it need never lower its artistic standard but simply broaden its usefulness.

HELEN E. CLEAVES
Assistant to the Director of Drawing and Manual Training
Boston, Massachusetts

THE MADONNA OF THE CHAIR

By Raphael

AMONG all the painters of The Madonna, Raphael Santi holds first place; and among all the Madonna pictures he produced, the Madonna of the Chair holds that place in the hearts of the lovers of beauty. Undoubtedly the supreme achievement of the master is the Sistine Madonna of Dresden. In a room by itself, it is in a class of its own, apart, exalted, superhuman; its appeal is to the elect. The Madonna of the Chair is in a room with many other pictures, in the Pitti Palace, Florence. Its appeal is to the crowds that flow and ebb around it year by year. Everybody has an affectionate smile and a word of genuine appreciation for this most home-like rendering of the Mother and her holy child.

There is a tradition that Raphael in one of his walks in Rome discovered at an inn a lovely mother enfolding her baby in her arms, another of her children standing near, forming just such a group as this, and that the artist rapidly sketched this picture then and there upon the head of a wine cask. A clever picture by Wittmer has given to this story an almost convincing reality. True or not, the Madonna of the Chair reflects charmingly the home-life of Raphael's day and has become for all time the very symbol of exalted maternity.

The picture was painted about 1516, when Raphael, then thirty-three years old, was in full possession of all his powers. No picture within a circle was ever more skilfully composed. The eye of the observer is passed gracefully along from one lovely contour to another, happily entertained with soft curves, and rich colors, sufficiently varied to hold an eager attention, sufficiently harmonious to give perpetual delight. Not once is the eye disturbed by any sudden or sharp transition; not once is the mind allowed to think of wandering outside the frame. Within this charmed circle it finds all it can desire of loveliness and peace.

Art Extension Print—"Madonna Della Sedia"
Pitti Gallery—Florence.
Raphael Sanzio. B. 1483. D. 1520. Italian School.

This print is made from a "Painting Proof" of Raphael's Madonna of the Chair. As Painting Proofs are fac-simile reproductions on canvas, the exact size of the originals,—truthful as to mellowness of color and depth of tone because made on canvas, correct in every detail and reflecting the very spirit of the painting because photographic, we are able to offer our readers an insert far more satisfactory than the usual reproductions seen.

This subject is the second of a series of old masterpieces offered by the American Art Extension. The large reproductions on canvas are available for wall decoration. Prints like this insert are available in quantities for study material with text by Henry Turner Bailey. Address, American Art Extension, School Study Dept., Fine Arts Bldg., Chicago.

Raphael had not Titian's mastery of color, nor is this even Raphael's best coloring, but it is pure and strong, and, for a Madonna, unusually harmonious. The traditional colors for the Virgin Mary are white, blue, and red. White is the symbol of purity, blue of constancy, and red of love. The famous madonnas whose robes are not of these colors could almost be numbered on the fingers of one hand. Raphael has given this madonna the red and the blue ; but for the white he has substituted green, the symbol of fruitfulness. White appears, however, in her head-dress and in the pattern over her shoulder. The child's robe is yellow, the color of gold, symbol of wisdom, for he was a revelation of the power and wisdom of God. The robe of the little John Baptist is orange, the symbol of benevolence and good will, highly appropriate to the one who said, "He must increase but I must decrease." The rich purple quality of the shadows and of the background completes the entire spectrum circuit of color. But the notes are not discordant. The tones seem to have been mixed with sunshine, with the wondrous tender light that falls into a forest glade, warm and golden, with a hint of green in it, toning the red to vermilion and orange, and the blue to turquoise and marine.

A photograph gives not the slightest hint of all this. Only a reproduction in color, such as that inserted here, can suggest it, and only such a reproduction as the Painting Proof itself can convey anything like an adequate idea of the glowing original. To see such a picture is like listening to a chord of music. If it has not the depth and richness of Titian's organ tones, it is nevertheless full and sweet and human, like the music of a choir.

HENRY TURNER BAILEY
North Scituate, Massachusetts

VOCATIONAL TRAINING

THE STATE TRADE SCHOOL, BRIDGEPORT, CONN.

IN cake-making we find certain ingredients included in almost every recipe. So in the organization of Trade Schools certain elements are always necessary. These fundamental elements are equipment, teachers, pupils, shop work, and academic work. The chief differences among Trade Schools lie in the quality and quantity of these fundamental elements. It is the purpose of this article to give the plan by which is carried on the work of the State Trade School of Bridgeport, Connecticut, and to explain the few points in which this school differs from others of its class.

This school has four departments, with others in process of organization. These are Carpentry, Machine-work, Printing, and Dressmaking.

The equipment of the carpentry shop is exactly that of a small but complete woodworking mill which turns out sash, door frames, and interior finish.

The machine department has an array of lathes, milling machines, planers, shapers, grinding machines and drill presses. The remarks most often made by visitors are that "the variety of machines is unusual" and that "they are the best of their kinds."

The print shop is the usual up-to-date job shop with electrically driven presses.

The dressmaking department is provided with sewing machines, dress forms, and sewing tables.

The teachers in all departments are practical craftsmen and craftswomen. In Trade Schools practical experience is a prime requisite. It is often possible to quickly transform a mechanic into a most successful teacher. The converse of this proposition is far less true. The mechanic who has successfully trained apprentices in a factory is already a good teacher. In

many factories there are foremen who "would like to teach the boys more if they were not obliged to give so much time to the turning out of the product." The mechanic who becomes a teacher must simply transfer his chief interest from the "commercial" product to the "boy" product.

Plate I. The equipment of the carpenter's shop is that of a small but complete woodworking mill.

The pupils of the State Trade School are just average boys and girls. For many of these, the public school has proven a failure. The average age of the pupils is sixteen and one-half years. The average educational attainment is sixth grade. Nothing is more marked in the school than is the changed at-

Plate II. The machine department is equipped with a great variety of up-to-date machinery, the best of its kind.

titude of the pupils who discover that they are not failures after all. Pupils may enter the school on any day of the year and may leave at any time. The average length of courses is two years.

In the shops is found the real life of the school. Here the pupils are doing real work under typical shop conditions. Not only are they taught the "how" to do the things as in a factory, but also the "why" it is best done that way. The efforts of the pupils are measured by commercial standards. The first requisite is accuracy, the second, speed. This last most necessary element has been almost lost sight of in the public schools of to-day.

Factory stock cards and time cards are kept by the pupils covering all their shop work. Attendance and tardiness records are kept by the time clocks.

The line of products of the machine shop includes C clamps, leveling jacks, bench grinders, arbor presses, and oil pumps. These are disposed of in the open market.

Three days ago the following typical letter was received by the carpentry department:

STATE TRADE SCHOOL, CITY

Gentlemen: —

Please send us 59 window frames for pairs of sash, 2′/6″ x 5′/2″. (Pulleys to be furnished by you and put in place.)

10 Door frames for doors, 2′/6″ x 6′/8″ x 1¼″.

15 Cellar sash frames for sash, 2′/10″ x 1′/9″ x 1¼″.

All as per sample frames submitted herewith.

All of above to match samples furnished in respect to material and manufacture.

Notify us when ready and we will call for same.

Yours truly,

B —— Company.

The print shop has more orders for business stationery and advertising booklets than it can fill.

The Trade School which puts a commercial product on the market needs a simple selling organization. But the one who solicits business for a trade school finds that he has a "human

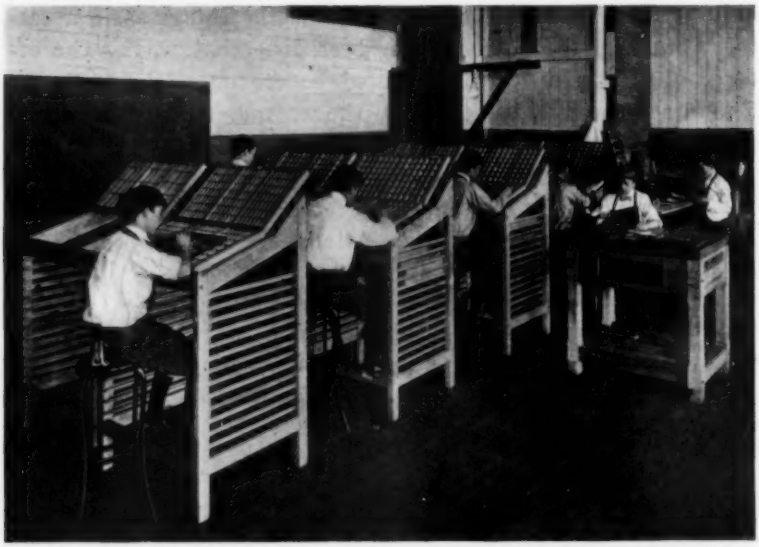


Plate III. The print shop is a fully equipped job printing office with electrically driven presses.

interest" talking point which brings orders if the goods are right and the price is right.

And why should we not educate the boy and girl by having them do the real work of the world? Such work certainly awakens greater interest than do mere "exercises" which must later be consigned to the waste-basket or scrap heap.

The shop work of the school covers two thirds of a nine-

hour day for the boys, and two thirds of a seven-hour day for the girls.

The one third of each day is devoted to academic work. This consists of mechanical drawing, shop mathematics and industrial history for the machinists; architectural drawing, cost

Plate IV. The dressmaking department is provided with sewing-machines, dress forms, and every other factor necessary in the making of a marketable product.

estimating, study of materials and industrial history for the carpenters; freehand drawing and lettering, arithmetic and industrial history for the printers; drawing, study of textiles, arithmetic and English for the dressmakers.

The drafting rooms have exactly the same relation to the shops that they do in a factory. Here from samples or sketches

are made the working drawings of the articles to be constructed in the shops.

Perhaps the most interesting feature of the school is the part time apprentice system. Under this plan the manufacturers of the city send to the school their apprentices for instruction. The amount of this instruction varies in time from one half a day a week to three days a week. In all cases where the apprentices attend less than half time, they receive their full wages while in attendance at the school. The instruction varies according to the special needs of the apprentices. A few boys receive all-round shop practice in the factories. To these mechanical drawing and shop mathematics is given. Others are engaged in work which is uneducative and repetitive. To such pupils the advantage of shop practice is offered.

The school is open every evening in the week except Sunday. The evening pupils are largely "specialists" (those who know how to run one tool or perform one manufacturing operation). They realize the one-sidedness of their training and wish to become all around mechanics. The school at present is able to accommodate only one fifth of those who have applied for evening work.

The school is free. It is supported by the State and is under the control of the State Board of Education. The aim of the school is "to teach all trades, at all times, — winter and summer, day and night — to all who wish to learn."

ALFRED P. FLETCHER
Principal, State Trade School
Bridgeport, Connecticut

ANNOTATED LESSONS
FEBRUARY

PRIMARY GRADES

PERSONAL EXPERIENCES

As a rule children represent more graphically any instance in which they themselves were concerned. The daily life of children in the winter is full of experiences which when told with the pencil involve pictorial drawing.

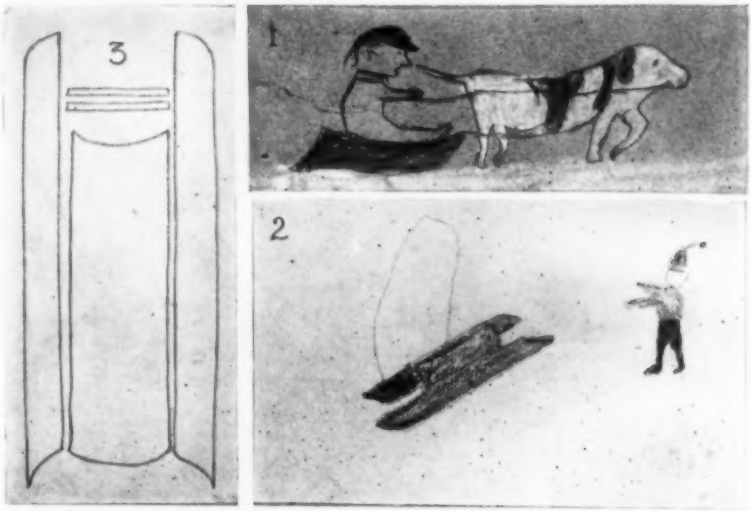


Plate I. Records of personal experiences, first year primary.

Plate I, Figure 1, reproduces a drawing by Raymond Ménard, aged 6, in the Dominican Academy, Fall River, Mass. Many children have had Raymond's experience, but few of them are so fortunately amusing in composition of line. Figure 2 is a drawing made by a little boy under the direction of Mr. Frederick Whitney of Salem. Figure 3 was made first to recall to the pupil's mind the principal parts of a sled. This elementary work in constructive drawing, preceding the illustration, is invaluable in sharpening the mental image of an object. A further development of this kind of exercise is given later in this outline by Miss Simpson.

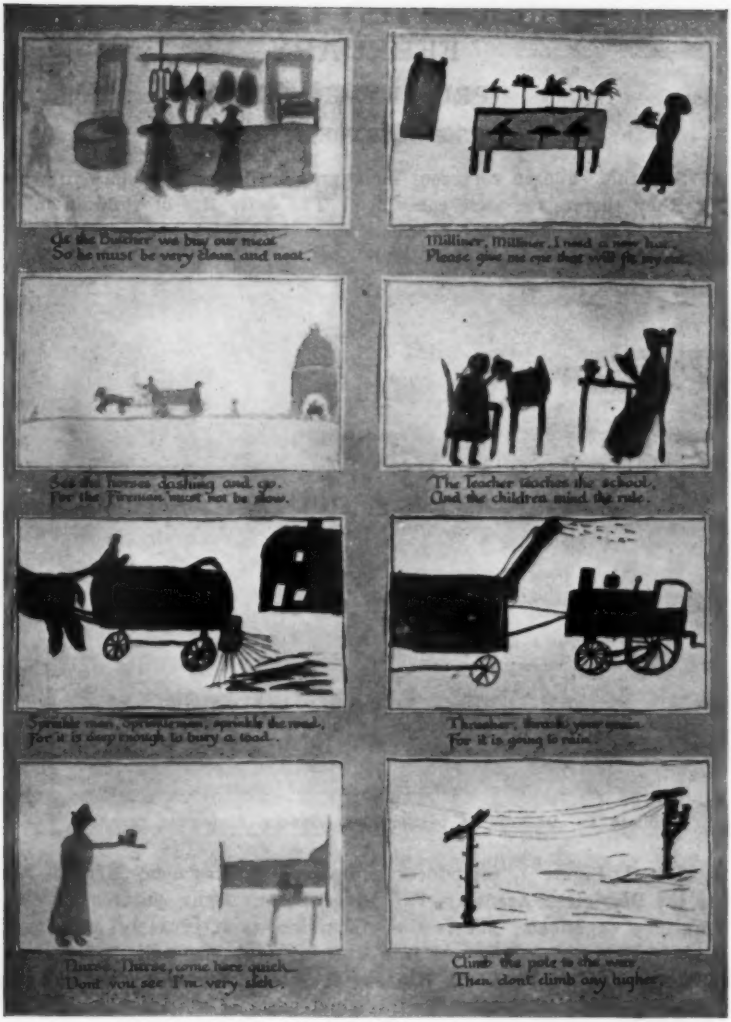

Milliner, Milliner, I need a new hat.
Please give me one that will fit my cat.
The Teacher teaches the school,
And the children mind the rule.
Sprinkle man, sprinkle man, sprinkle the road,
For it is deep enough to bury a toad.
Climb the pole to the wire,
Then don't climb any higher.

Plate II. Pages from occupation booklets, with original rhymes by primary children, Ottawa, Ill.

PERSONAL OBSERVATIONS

Plate II gives eight illustrations from one of the fascinating booklets made by the children in Ottawa under the direction of Miss Fanny J. Kendall.

Plate III. Groups of toys arranged and drawn by third year primary children.

GROUPS OF TOYS

The children of the third primary grade are old enough to begin to make with toys groups which suggest stories. Plate III shows one such group arranged and drawn by a little girl of eight, Florence McCarthy of the State Normal Training School, Fitchburg, Mass. The original is in water-color. Some of the most interesting groups of this sort are made by combining toy animals with objects to imitate scenes in a circus. The drawing at the left by George Whitcomb, II, Minot, N. D., and that at the right by Hattie Walker of Rye, N. Y., are illustrative of this type of work.

GRAMMAR GRADES

WINTER LANDSCAPES

The landscape is a good problem for fourth grade children who have had practice in the making of silhouettes. The most effective results are secured thru the selection of subjects which lend themselves to the silhouette treatment, such, for example, as the snow-covered fields with a distant group of buildings or trees, a view from a wood looking out thru the dark tree-trunks to the snowy fields beyond, a view over the tops of houses or other buildings at sunset. Plate IV shows two drawings

Plate IV. Landscapes from the schoolhouse window, fourth grade children, Beverly, Mass.

of this third type made by fourth grade children in Beverly, Mass., under the direction of Mr. Frederick Whitney. The originals were done with good writing ink on white paper and were views from the schoolhouse window.

CYLINDRICAL STRUCTURES

Plate V. Along with the instruction in the fifth grade concerning the foreshortening of circles should go an observation of such structures as gas-houses, stand-pipes, water-tanks, and the like, which exhibit the foreshortening of circles in the large. These may be studied by the children and drawn from memory, and the results compared and discussed. The drawing by Roger Curtis, V, Marlboro, Mass., of the stand-pipe is a good example of work of this kind.

SERIAL GROUPS

The entire time allowed for pictorial drawing in the middle grammar grades may sometimes be profitably devoted to the working out of

a series of illustrations of some process of interest to the children. Four examples of work of this kind are given in Plate VI. These are from a series illustrating "Preserving Time," made by sixth grade pupils under the direction of Mr. Whitney. The whole process of making preserves of various kinds was followed by the children in the domestic science department. They actually made the preserves. Consequently the representation of the utensils they used, the preserving kettle, the sugar bucket, the fruit required in the making of marmalade, had an especial interest for them, and they entered with zest into the representation of these objects to illustrate their language papers. The originals reproduced herewith were drawn in pencil on ordinary drawing paper.

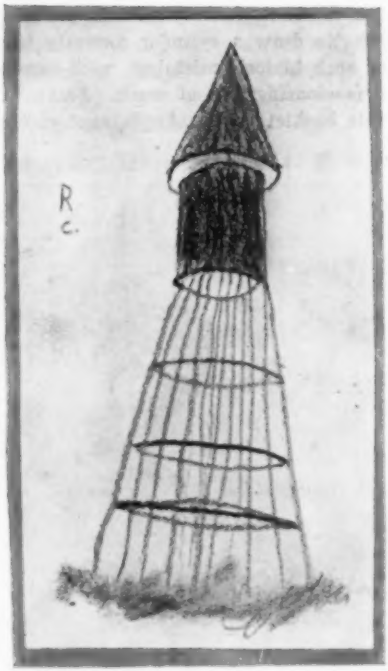


Plate V. The stand-pipe, drawing from nature by a fifth grade pupil.

BOOKLETS ON PICTORIAL DRAWING

The results which have come from the Outlines published in The School Arts Book during the last few years, in the form of booklets dealing with various phases of pictorial drawing, prove beyond doubt the value of this kind of work. There is no good reason why the history of drawing should not furnish as educational a topic as the history of war. A fascinating field for investigation is offered to the enthusiastic teacher and her ambitious class by the records which artists of various nationalities have left during the last four thousand years. Children are not only interested but comforted to know that the mistakes in pictorial drawing which they make to-day were made by the most skilful draftsmen during a period to be measured by centuries; that not until

the fifteenth century of our era did the artists find out, for example, how to draw a cylinder correctly in any position. An illustrated record of such historic mistakes, with corrected drawings by the children, offers a fascinating line of work. Plate VII shows two pages from an admirable booklet on the Appearance of Objects by John R. C. Stard, 12 years

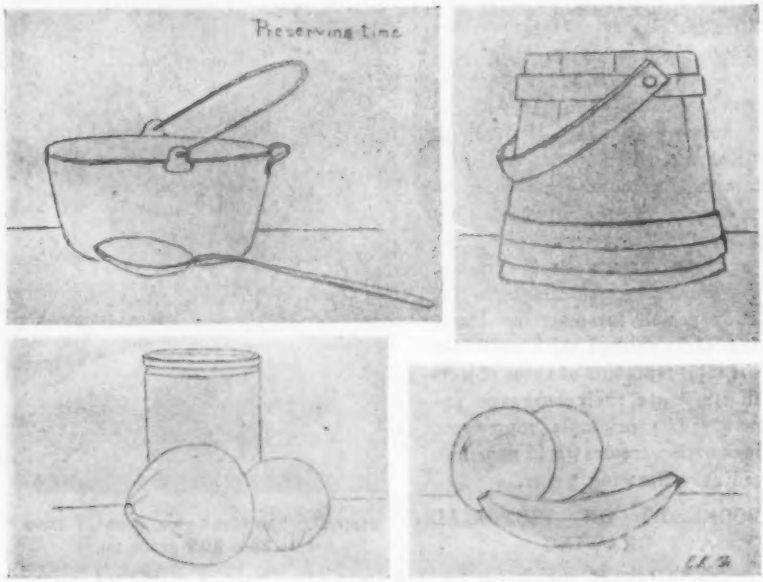


Plate VI. A series of related groups illustrating Preserving Time, by sixth grade pupils, Salem, Mass.

of age, in the Wendell Phillips School, Boston, Mass. Some of the illustrations were clipped from magazines, but most of them were drawn by John himself. Each page was carefully planned and the text was not only well written but lettered with care. The whole booklet presented a most attractive appearance, and not only John but his teacher felt that the time devoted to the making of the volume was well spent.

Plate VIII shows a page from a similar booklet (in this case a portfolio of illustrations and text) made by Harold J. Brown, 13 years of age, of the State Normal Training School, Fitchburg, Mass.

THE TRADES AND OCCUPATIONS

Plate IX gives a series of pencil drawings made by pupils in Salem,

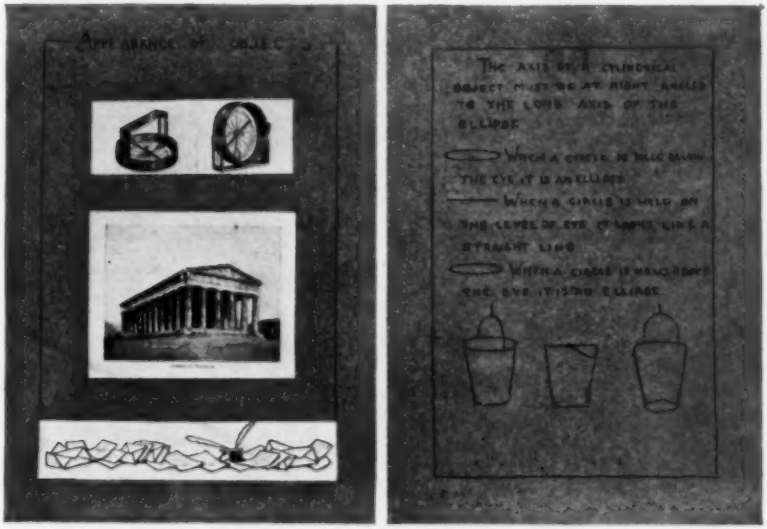


Plate VII. Pages from a booklet on Appearance Drawing, by a seventh grade pupil, Boston, Mass.

Mass., under the direction of Mr. Whitney. These illustrations are typical. In this particular case they are from a series made by the children illustrating the work of the mason. Here you see his mortar tub on a scaffolding to which he ascends by means of a ladder, his trowel stuck in the mortar is represented (for a simple object a most difficult one to draw), the hod of his helper, the corner of a wall which the mason has started to build showing the proportions of individual bricks and

how they are arranged to bond the wall properly. The other illustration in this series is an attempt to show a completed chimney as it appears coming thru the roof. Of course the critic will find fault with the proportions of the bricks and with the drawing of the chimney, especially where it enters the roof. Nevertheless the results are on the whole satisfactory, considering the age of the pupils who made the drawings.

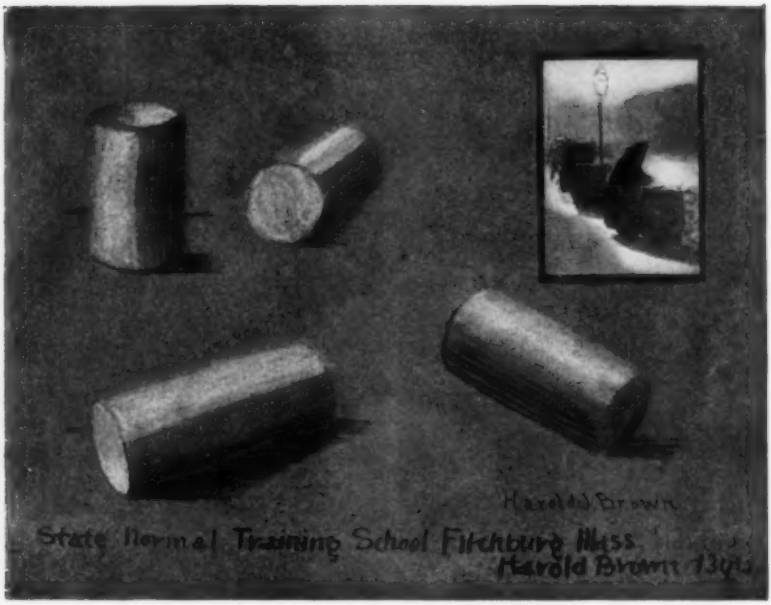


Plate VIII. Page from a portfolio of illustrations, by an eighth grade pupil, Fitchburg, Mass.

One is not expected to know everything in the seventh grade. The trade of the carpenter, of the market gardener, of the florist, of the butcher, the baker, the candlestick-maker, offers equally attractive material for essays of this kind. The children themselves should be allowed to select the subjects. They will soon discover what they can represent correctly

and what they need to study a little more carefully. The whole process may be made thoroly educational.

TRANSFORMATIONS OF MATERIAL

Plate X shows another line of applied pictorial drawing worked out by Mr. Whitney. The illustrations given merely suggest the series.

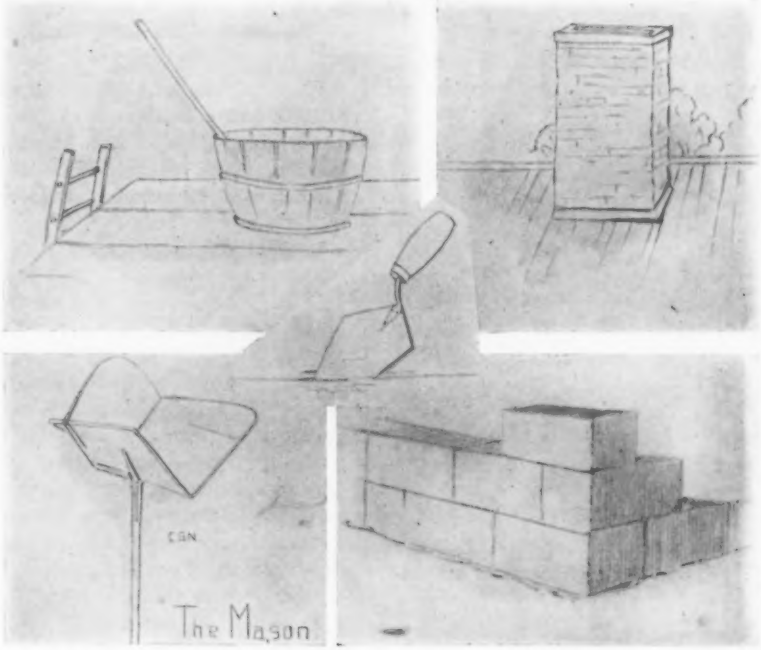


Plate IX. Related drawings from the object illustrating the trade of the mason, by eighth grade pupils, Salem, Mass.

The topic in this case is the history of lumber. The children made sketches of the forests up in the hills, of the logs being transported to the mill, of the saw-mill itself with its tall chimney, and then of the

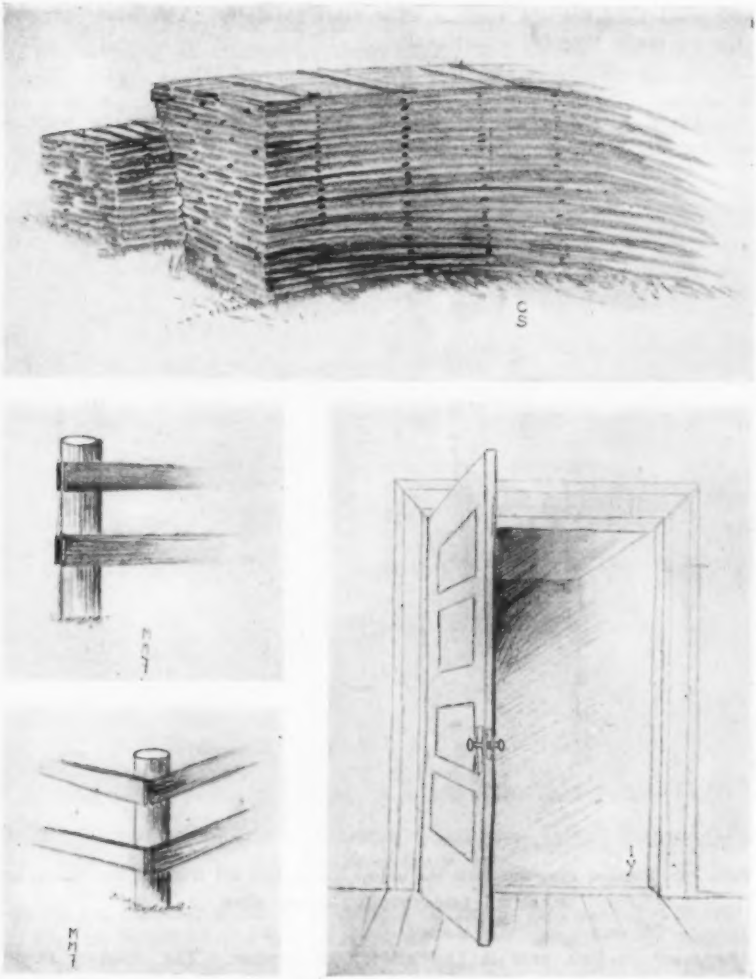


Plate X. Related drawings illustrating the transformation of material, by eighth grade pupils, Salem, Mass.

piles of lumber. One example of a lumber pile is given in the upper part of Plate X. The lower part of the plate contains three selected from many illustrations of the uses of lumber. In this case fences and doors are represented. The history of other materials, such as iron, coal, hemp, cotton, and rubber, is equally educational and delightful to seventh or eighth grade children.

COMMONPLACE THINGS

By the time children reach the eighth grade a renewed interest in commonplace objects may be aroused thru model and object drawing, and at the same time greater skill in model and object drawing may be developed by means of such objects. Plate XI illustrates a "stunt" which appeals strongly to certain pupils. The question is, Can you represent an umbrella open and closed so that comparing the two drawings one would recognize the umbrella as the same? Can you represent a book or a magazine in the same way, or a pair of scissors, or the door of a room, or a box with a hinged cover? The illustrations in the plate were not made by the same pupil. The upper one was drawn by Sarah Emery of the State Normal Training School, Oneonta, N. Y., and the lower one by Samuel Cohen of the Phillips School, Boston, Mass. But they serve to suggest the challenging problem. Plate XII shows another phase of this same problem, perhaps in simpler form, namely the same object in several different positions. This strawberry basket was drawn by Miss Etta Chinitz, VIII, New Britain, Conn. The original was drawn in pencil and finished in water-color imitating the color of the wood. This drawing received a first prize in one of the guild contests.

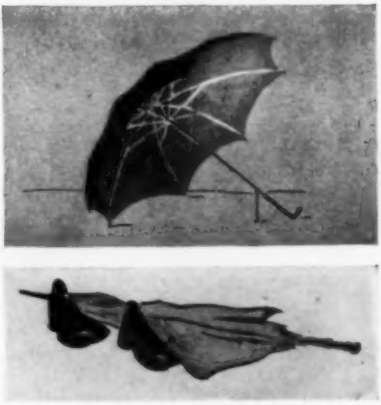


Plate XI. Commonplace things under different conditions. Drawings by eighth grade pupils.

PROGRESSIVE DRAWINGS FROM ORIGINAL MODELS

We are indebted to Miss Maud A. Simpson of Portland, Me., for the brilliant idea illustrated in Plate XIII. Objects are selected and models of each may be made in paper. In this particular case the object was a sled with a Christmas box upon it. The flat of the sled was first cut from paper, then folded into shape, and placed in a convenient position for study. A, b, and c show successive steps in the working out of the correct drawing of this flat. A little box, made of paper and tied up with a string, was then placed upon the paper sled and its drawing worked out after the same manner. The final problem, illustrated in the lower part of the plate, was to make a perspective drawing of these objects which should look real. In the working out of this problem the children were allowed to use color. The drawing reproduced, by Tena Press, 15 years of age, Butler School, Portland, Me., reflects credit not only upon Tena but upon her teacher.

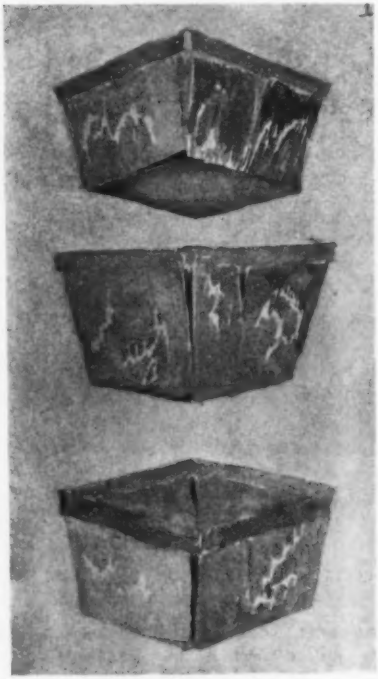


Plate XII. A common object in different positions. First prize drawing by Miss Etta Chinitz, New Britain, Conn.

GROUPS IN COLOR

During the last year in the grammar school many of the pupils are mature enough to appreciate groups arranged for beauty of color. Such groups need not have an evident story. Of course the objects should not be inconsistent with one another, but they should be brought together primarily for the purpose of producing a charming effect of color. The frontispiece is an illustration of such a group. It is reproduced from a water color drawing

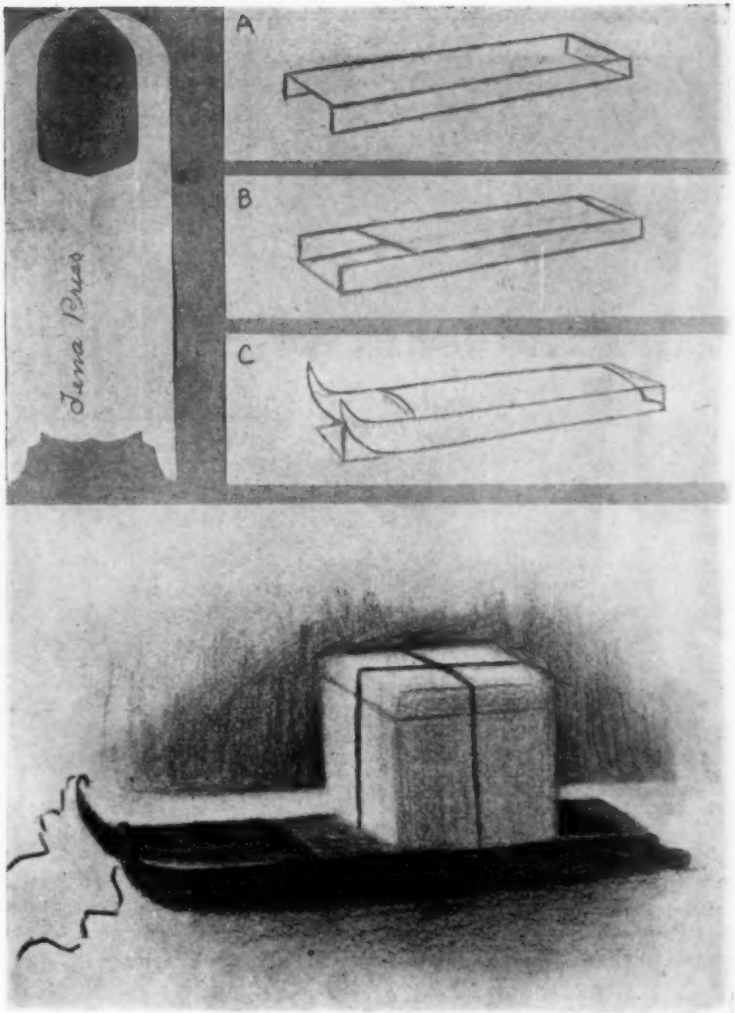


Plate XIII. Progressive drawings from original models by eighth grade pupils, Portland, Me.

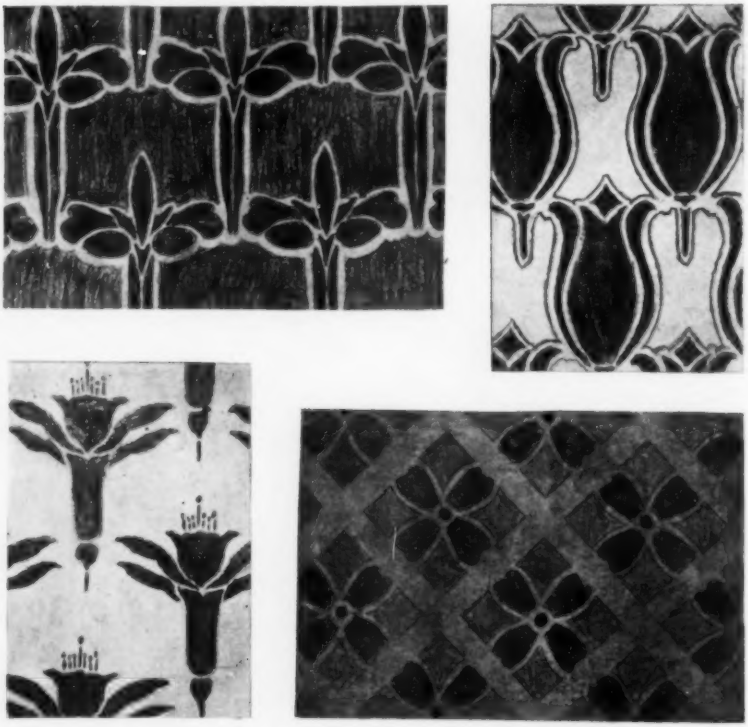


Plate XIV. Surface covers worked out with colored crayon and water color by high school pupils, New York City.

made directly from the objects by Mr. Frederick Whitney in the presence of a class to show a method of handling. There is nothing uncertain or fortuitous about work of this kind. Every touch is evident, every dot and blur is intentional. Such work is educational in the highest degree.

H. T. B.

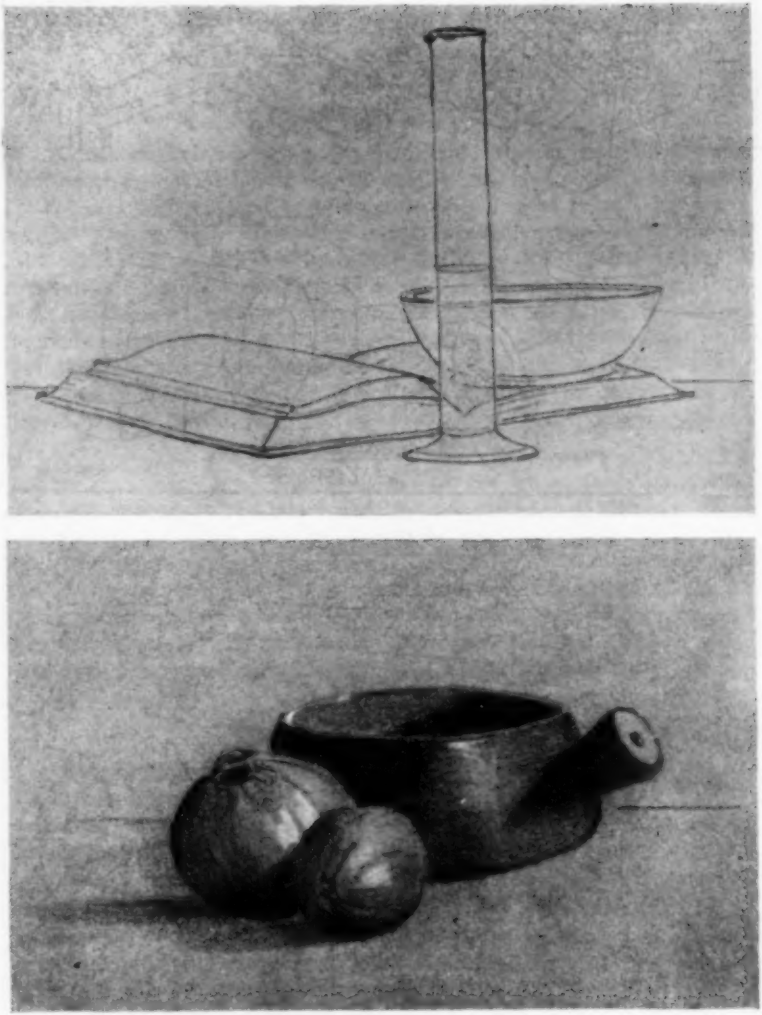
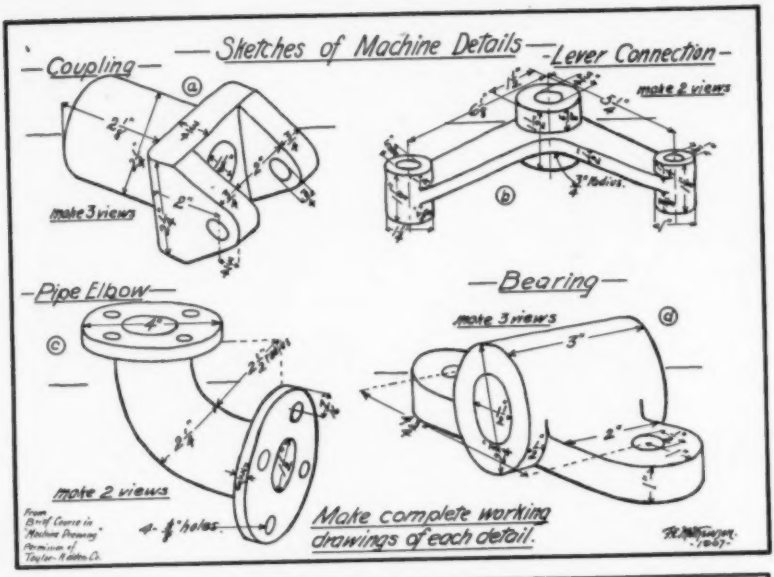


Plate XV. Studies of groups in outline and light-and-shade by high school pupils, New York City.


Sketches of Machine Details
Coupling
Lever Connection
make 3 views
make 2 views
Pipe Elbow
Bearing
make 2 views
make 3 views
Make complete working drawings of each detail.

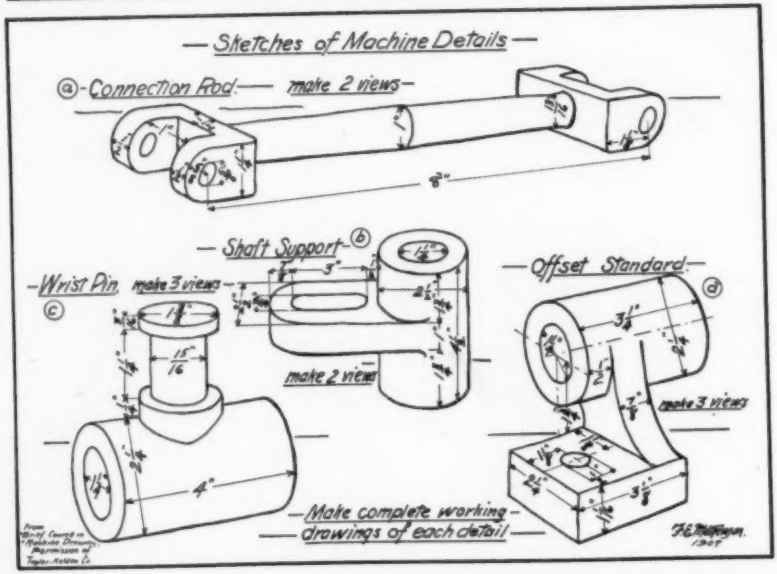

Sketches of Machine Details
Connection Rod
make 2 views
Shaft Support
Wrist Pin
make 3 views
make 2 views
Offset Standard
make 3 views
Make complete working drawings of each detail

Plate XVI.

HIGH SCHOOL. FREEHAND

DECORATIVE DESIGNS

Pupils of high school age are sufficiently mature to appreciate the solution of a problem for its own sake. The working out of surface patterns, either with abstract spots or with units derived from flower forms, whether these patterns are applied or not, is an educational problem which in the hands of a skilful teacher will yield beautiful results on paper and valuable results in the pupil's mind — a keener appreciation of fine space relations, of graceful curvature, of harmonious notan, of pleasing intervals of color. The designs shown in Plate XIV (unfortunately not reproduced in color) are examples of surface patterns done in colored crayon by high school pupils in New York City under the direction of Mr. Harold Haven Brown.

EFFECTIVE GROUPS

In the lower grades the significance of the group, the story it suggests, its relation to the interests of the children are emphasized. With high school pupils, the emphasis should be upon the beauty of arrangement, the light-and-shade, the color which the group exhibits, and upon the effective rendering of the objects in appropriate medium. Plate XV shows two groups of this kind, the first rendered in pencil outline, the second in charcoal with touches of white chalk, by high school pupils, New York City, under the direction of Mr. Harold Haven Brown.

HIGH SCHOOL. MECHANICAL

MACHINE DRAWING

The two plates reproduced in Plate XVI show the kind of sheets which should be required from second year high school pupils. The original sheets are 11 x 14½ inches with inch margins. F. E. M.

STRUCTURAL DESIGN

Designs for woodturning. Wooden bowls or saucers for the dressing table, collar and button boxes, card trays, and picture frames are good subjects. Their successful design involves a keen sense for rhythmic measures and for refined contour curves. The drawing reproduced as Plate XVII shows good work of this class, from the Central High School, Minneapolis, Minn.

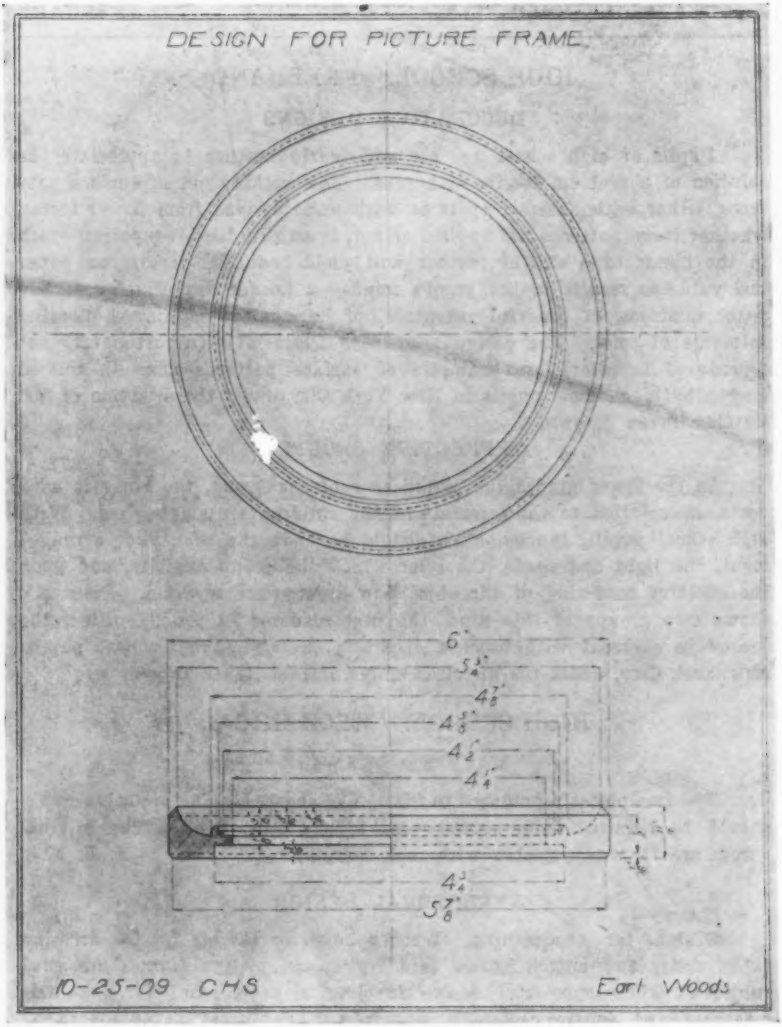


Plate XVII. Design for a picture frame, Earl Woods, Central High Schol, Minneapolis, Minn.

HELPFUL REFERENCE MATERIAL

BOOKS ON MODEL AND OBJECT DRAWING WHICH HAVE BEEN REVIEWED IN PREVIOUS NUMBERS OF THE SCHOOL ARTS BOOK

Applied Arts Drawing Books, Wilhelmina Seegmiller, Atkinson, Mentzer & Grover, September, 1908, p. 87; April, 1909, p. 852.

Art Educational Drawing Book Course, Prang Educational Company, January, 1907, p. 439.

Art Education for High Schools, Prang Educational Company, June, 1908, p. 919.

Freehand Perspective and Sketching, Dora Miriam Norton, Published by the Author, Pratt Institute, May, 1909, p. 973.

How to Draw, Henry Warren Poor, Published by the Author, November, 1908, p. 286.

Line and Form, Walter Crane, The Macmillan Company, March, 1905, p. 428.

Parallel Course Drawing Books, C. S. and A. G. Hammock, D. C. Heath & Company, September, 1908, p. 88.

Perspective Sketching from Working Drawings, Frank E. Mathewson, The Taylor-Holden Company, November, 1908, p. 285.

Simplified Mechanical Perspective, Frank Forrest Frederick, The Manual Arts Press, January, 1910, p. 545.

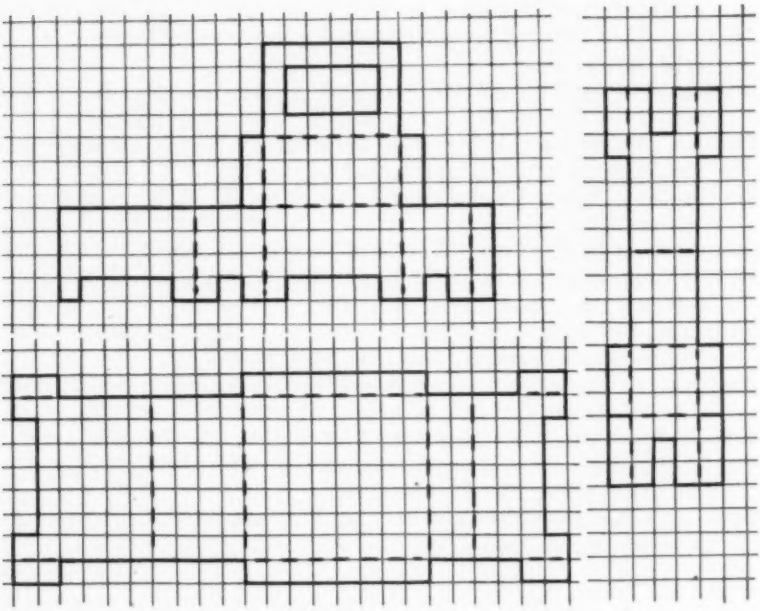
Text Books of Art Education, Hugo B. Froehlich and Bonnie E. Snow, Prang Educational Company, June, 1904, p. 485; October, 1904, p. 91; June, 1905, p. 660; March, 1906, p. 522.

Thompson's New Short Course in Drawing, Freehand Series, D. C. Heath & Company, March, 1907, p. 607.

THE WORKSHOP

PAPER CONSTRUCTION

The toy furniture given in the January number, furniture appropriate to the dining-room, is here supplemented by furniture appropriate to the bed chamber.

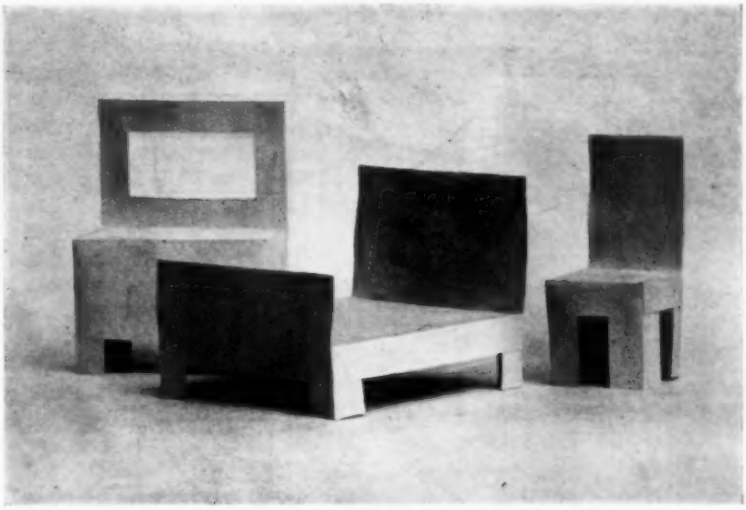


The construction of the bed, the bureau, and a chair are clearly indicated by the diagram giving the drawings of the flats upon the squared paper.

The completed models are shown in perspective in the halftone illustration.

ANNA J. LAMPHIER
State Normal School
North Adams, Massachusetts

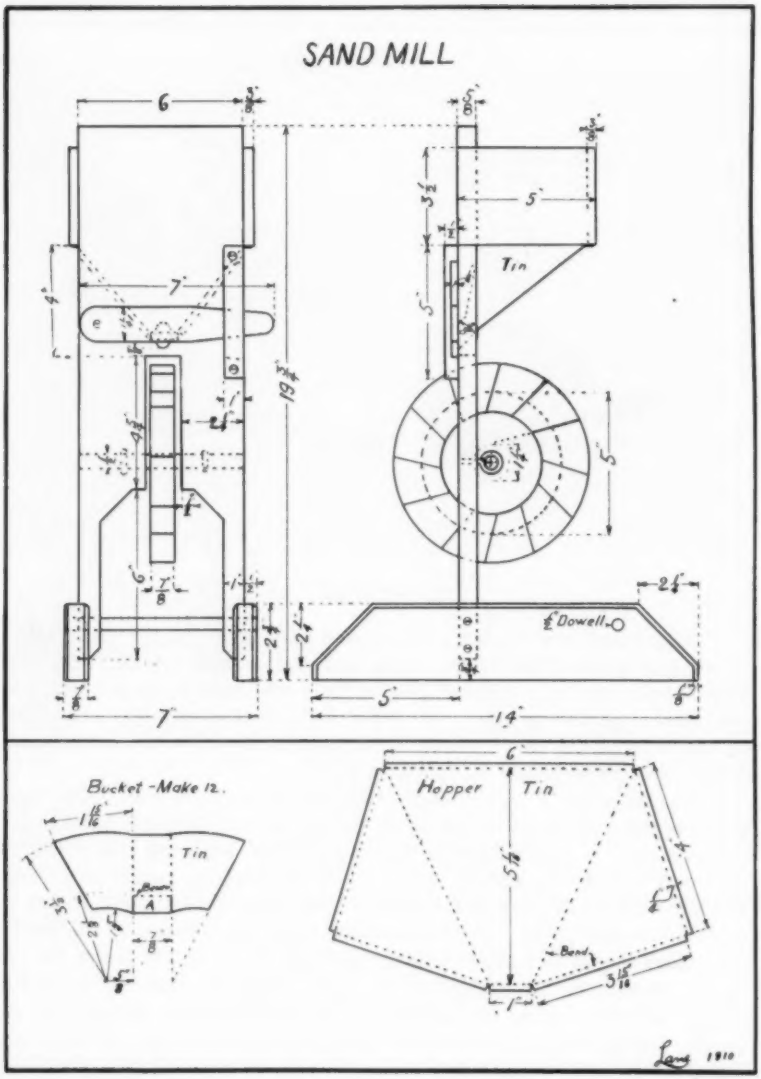
Owing to an extracrdinary accident, Miss Lamphier's manuscript, in company with several others, was lost, and a duplicate could not be secured in time for publication in this number. Editor.

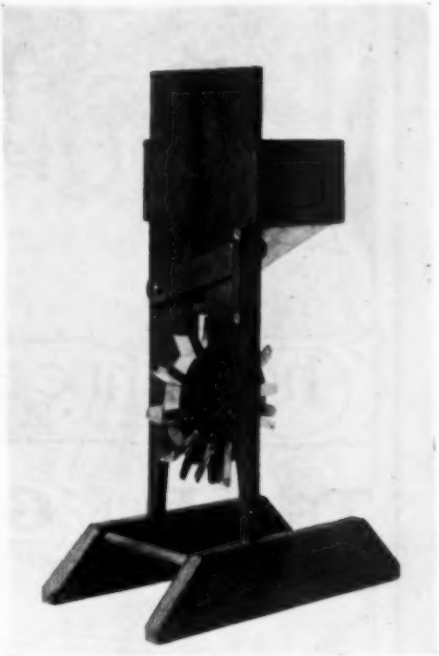


SAND MILL

This model was suggested by a sand mill, made by my grandfather, which was painted in bright colors, and had a man on the side, who worked hard turning a crank as long as there was sand in the hopper. The one shown in the picture was made for the kindergarten sand-table by the boys of the eighth grade. The buckets shown in the drawing are deeper than those shown in the picture.

Construction: White wood is the best material to use. The three pieces forming the sand box should be planed in one piece, the other pieces can probably be handled better separately. The place for the wheel in the lower part of the upright, may be laid out with the square and gauge and cut with the rip-saw and chisel. The $\frac{5}{8}$" hole for the sand should be bored at an angle of 45° and the sides and upper edge beveled on the inside. The wheel should be perfectly round and true. Lay out the places for the twelve buckets on the circumference, draw circles $\frac{5}{8}$" and $2\frac{1}{8}$" from the center, and lines from the points on the circumference tangent to the smaller circle. With the back-saw saw down on these lines to the larger circle.

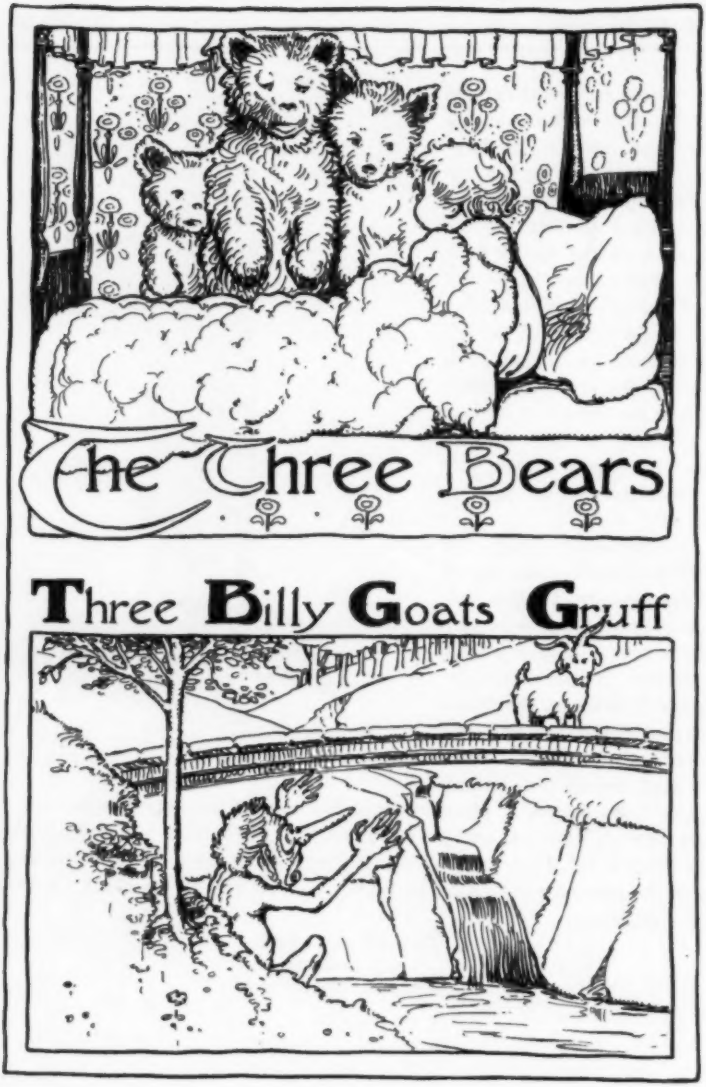

SAND MILL
6
7
19½
3½
5
Tin
5
2½
Dowell
5
14
7
Bucket - Make 12.
Tin
Bend
Hopper
Tin
6
5⅝
4
Bend
Long 1910



Cocoa cans will furnish tin for the buckets and a larger can that for the hopper; lay out one bucket according to the drawing and use it as a pattern for the others, bend the flap A back and pound down flat, and bend the sides at right angles to the bottom. Place all the buckets in the saw cuts, see that the outer edges form a circle and fasten with two 4-oz. tacks in each bucket. The edge of one bucket may be soldered to the side of the next one.

Assembly: Brad the sand box together and fasten it temporarily to the upright; bend the tin hopper on the dotted lines and fit it perfectly. There should be no break between the inner surface of the tin and the hole in the upright. Brad the sand box to the upright and tack the hopper in place. Fasten the upright into the gain in each foot with two 1¼" screws, and the gate and gate guide with ¾" and 1" screws. The shaft is ½" dowel rod and the bearings, screw-eyes cut off and driven in up to the eye. A pulley may be added to either end of the shaft for driving toy machinery.

FRANK P. LANE
Hill Institute
Northampton, Massachusetts


The Three Bears
Three Billy Goats Gruff

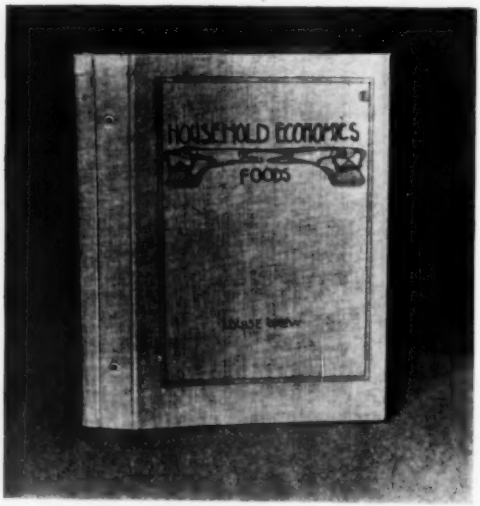
The Pied Piper of Hamelin

And the Piper advanced . . . And the children followed . . .

AN EXHIBIT OF GOOD WORK

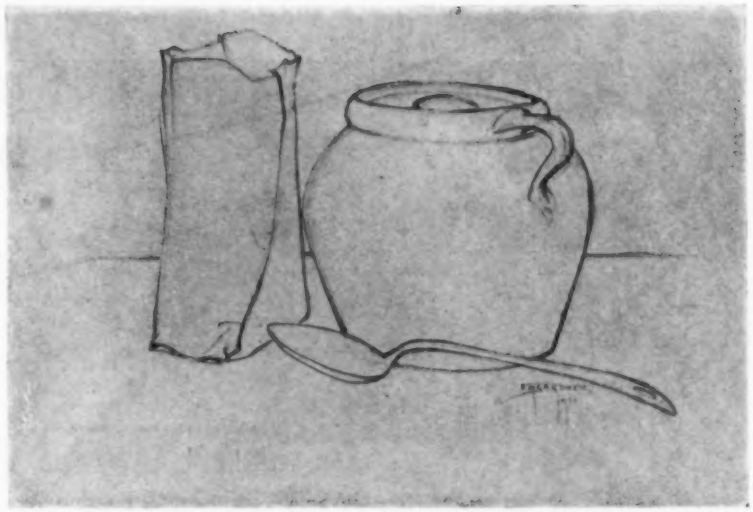
FROM THE SCHOOLS OF NEWTON, MASSACHUSETTS

FRED HAMILTON DANIELS, Director of Drawing



Note book cover design; girls' class,
Technical high school

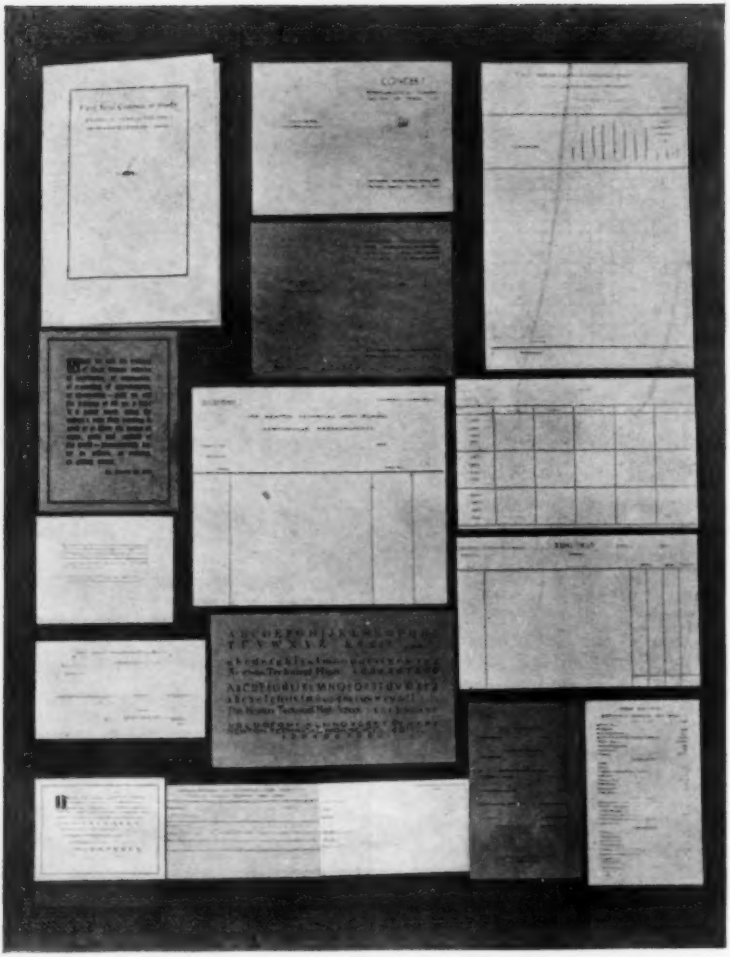
Newton, Massachusetts, is a city composed of fourteen villages with a total population of 40,000. There is one supervisor of drawing, who directs the drawing work from the kindergarten through the high schools, one assistant supervisor in the grades, three teachers of freehand drawing in the high schools, two teachers of mechanical drawing in the high schools, five teachers of mechanical drawing in the Evening Industrial school, and one in the day Industrial school. There is one supervisor of manual training, M. J. Murray, who has the direction of all manual training thruout the grades and the high schools; he has four assistants in the grades, five in the Technical high school, and four in the Industrial school. (The Technical high school and the Industrial school were opened in 1909.)



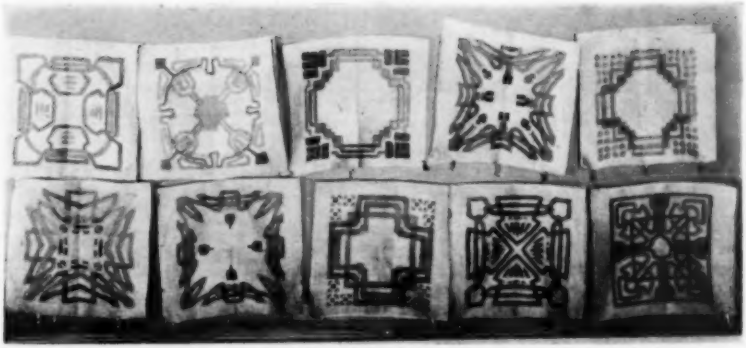
No. 1. ORIGINAL ADVERTISEMENT.
No. 2. REARRANGED WITH GOOD SPACING

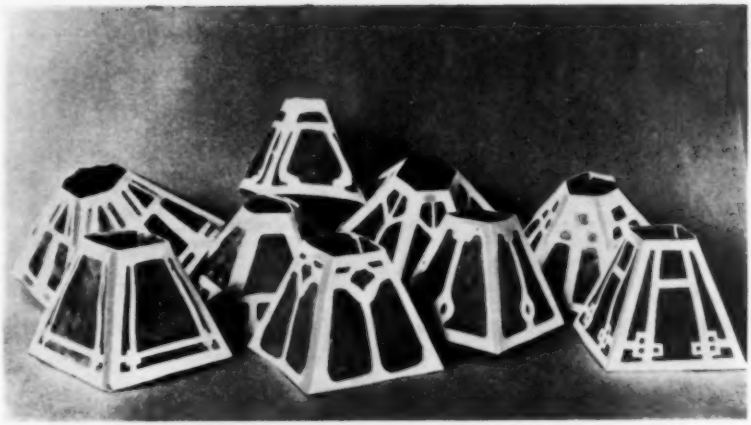
M. AGNES SMITH

At the top: First year high school object drawing
Lower illustration: One problem in the course for students in the high school commercial classes



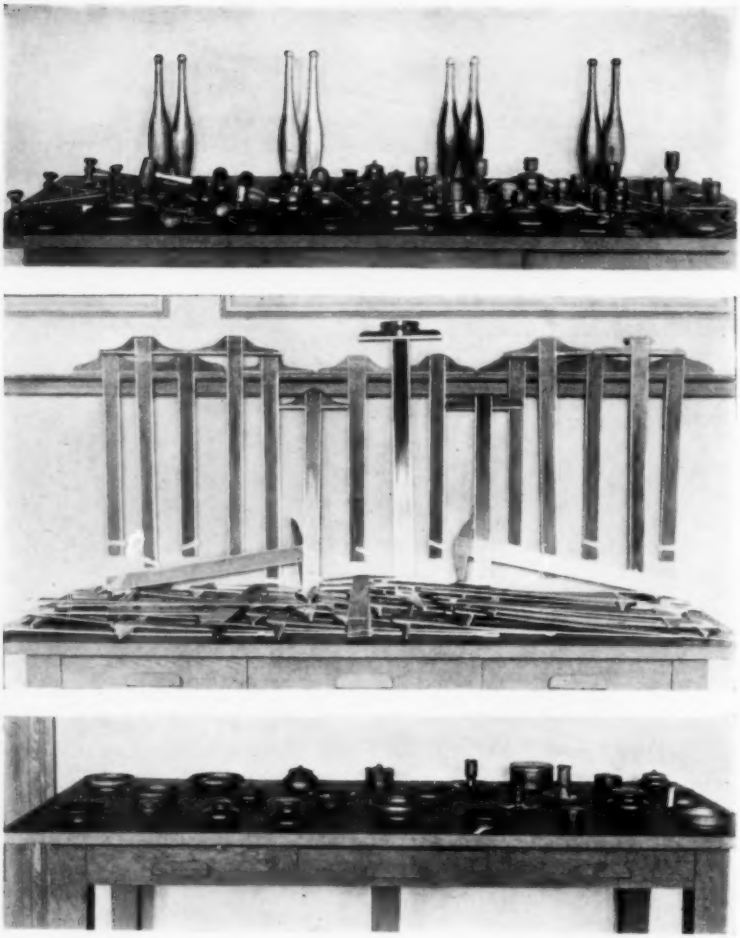
In the Technical high school there is a complete printing plant where practically all the school department printing and considerable other work is done



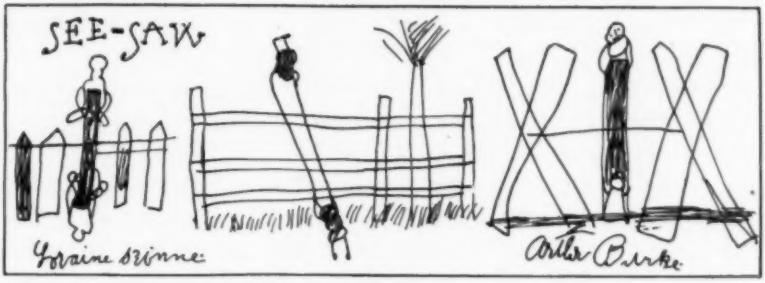


At the top: Sofa cushion covers by ninth grade pupils
Lower illustration: Lamp shades made by girls in household economics department, Technical high school

The high schools of Newton offer nine distinct courses to the students. In this list of courses is the Fine Arts Course (probably the first Fine Arts high school course to be offered in this country), in which art is made the dominating theme about which other studies are grouped.



Work in wood, designed and executed by first year Technical high school boys: — Indian clubs, dumb bells, nut bowls, card receivers, candlesticks, napkin rings, hair receivers, collar boxes, jewelry boxes, rapping mallets and bench rammers for foundry work, T squares.



EDITORIAL

THE latest word of the psychologists on Perception is this from the fourth edition of Dr. Angell's book: "While a portion of what we perceive is always supplied from without, another portion, and often the dominant portion, is supplied from within ourselves."

How well the "see-saw" drawings at the head of this page illustrate this dictum! They were traced from the originals in pencil by three first grade children in one of the states of the middle west — the region which the "typical American" is said to infest — and may therefore be regarded as authoritative. An adult asked to draw a see-saw would never think of representing it otherwise than in side view, with one boy up and one boy down, balanced over any sort of a fulcrum that happened to dodge under the plank at the moment. The see-saw experience is so remote, it lies buried so deep in the downy antiquity of youth, that for the adult it retains nothing of the personal element. See-sawing is merely one of the foolish activities of present-day children, something languidly observed occasionally, an indifferent application of the principle of balance, better exemplified in supply-and-demand, or in a ledger. But to the child the see-saw is a thrilling personal experience. When asked to represent it, he must draw the supports to left and right, the plank straight in front, with the other fellow 'way

up there above in the sky, or 'way down there below in the grass. Such drawings say as plainly as print, "All of which I saw, and *a part of which I was.*"

The tendency to pictorial expression seems to be strongest when the child dwells blissfully in what Dr. Harris used to call "a state of unreflected immediacy," and to weaken inversely with the growth of his power of self-detachment. When the child himself is no longer a vital part of the thing he would represent, he contributes so little to that "supplied from without" that his perception is not of sufficient vitality to reproduce itself as a drawing.

The problem of the teacher of pictorial drawing appears to be, therefore, the development of "that portion supplied from within,— of that *with which* the pupil observes. "Almost the whole of human genius," says Balzac, "consists in observing well."

How shall this "portion supplied from within" be enriched, that good pictorial drawing may appear in the upper grades?

Dr. Herman T. Lukens answers: "By giving children access to an abundance of good pictures, illustrated books, magazines and photographs." [1]

Mr. H. G. Fitz answers: By developing "the ability to set aside the things that clamor for attention and attend to those that ordinarily escape our observation." [2]

Dr. John Dewey says: "The art instinct grows out of the communicating and constructive instincts. It is their refinement and full manifestation. Make the construction adequate, make it full, free, and flexible, give it a social motive, something to tell, and you have a work of art." [3]

1 Pedagogical Seminary, October, 1896.
2 Popular Science Monthly, October, 1897.
3 The School and Society, p. 60.

Dr. James R. Angell says: "We come in childhood to recognize the salient characteristics of the common things about us. . . . During adolescence we enrich this material by observing more accurately the details of these things. . . . Growth in the powers of perception consists in the further elaboration of our discriminative and associative activities. . . . Development in perception really involves perceiving *new objects* in the old." Furthermore, Dr. Angell says, we often see what we are *expecting* to see.[1]

These answers, kneaded into one, make this: Familiarize the pupil with good pictorial art, give him a motive for expression, forewarn his eye, and strengthen his will.

This resultant is worth further consideration. If "the strongest motive determines the will," as many philosophical thinkers claim, then when the pupil has a sufficiently strong motive for pictorial expression, his will will hold him to the task in hand. Furthermore, if familiarity with good pictorial art will establish potent standards of excellence in representation, then the eye will be sufficiently forewarned and therefore forearmed by the study of works of art. In other words: If a pupil knows what correct representation is, and has a sufficiently keen desire to produce it, he will learn by practice to draw well.

That statement is undoubtedly true, but its presuppositions are audacious. *If* a pupil knows, if his desire is *sufficiently* keen, and if he will *practice*—ah! therefrom grins at us our old three-headed enemy unchanged for all our learned psychologizing. Both experience and observation lead the thoughtful teacher of pictorial drawing to hold rather tenaciously to three conclusions:

(1) The mere observation of fine examples of pictorial art

1 Psychology, Chapter on Perception.

is not sufficient to establish standards which will insure correct drawing.

(2) Desire, alone, no matter how keen, can never produce correct drawing.

(3) Persistent practice, of itself, cannot result in correct drawing.

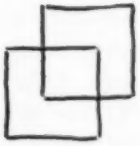
The practice must be *under guidance;* the desire must be backed by *intelligence;* the observation must be that of the *forewarned* eye.

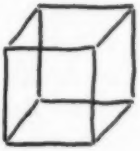
The surest guide, the soundest instructor, the most alert sentinel in pictorial drawing is named Perspective Theory. Perspective Theory will enable the pupil to observe and to judge justly the drawing of the masters, old or new. Perspective Theory will forearm that keen desire to draw, to such an extent that the drawing will be at least right-intentioned, and therefore hopeful, promising. Perspective Theory will inform the eye, teach it what to expect to see, and therefore aid it in seeing.

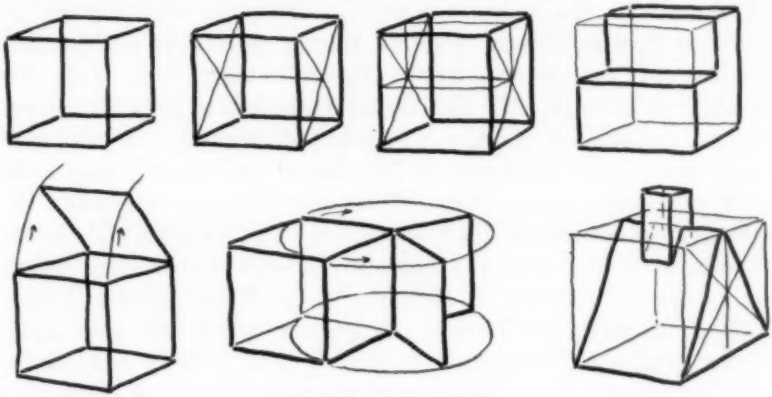
Perspective Theory is the professional name of a power of the mind, a function of the brain, a habit of thought, a trick of the human spirit (call it what you will) which enables one to *think in three dimensions.* Perspective means to *look thru.* "All things," says Emerson, "are pervious to wit." Unless the artist can see thru a stone wall, look around a corner, read the other side, live in a house on paper, build castles in Spain, he is no artist, he cannot draw. Nor can any pupil whatsoever be taught to draw correctly unless he can be taught to *perspect* the solid world, to see it transparent, to image things clearly in three dimensions of space.

The love of doing this is active in every child who draws two squares, and connects the corners to make a box. Therein children for generations have given us our cue, but we have

rejected it. We must begin right *there*, however, if we are to achieve success in teaching children to draw correctly the appearance of common objects. They must be led to play with this airy solid, to number its corners, its edges, and its faces; to find the center of each face by diagonals; to cut the cube in two; to cut out a quarter of it to make steps; to lift its top face like a lid; to swing its side face like a door; to pile one cube upon another; place two side by side, corner to corner; in short, *to do in imagination all* that could be done in reality, *and more.* Building on this foundation, as unsubstantial as it seems, we shall be able to construct a solid fabric of knowledge. Beginning with this feat of the imagination we shall be able to establish a habit of mind. Beginning with such drawing we shall be successful in helping the child to gather that "other portion, supplied from within" which will enable him to draw correctly, the appearance of things.







Perspective gymnastics

This power to think in three dimensions will be fostered by such exercises as those given by Miss Reed in her article in this number, called Creative Model Drawing. It will be fostered by modeling in clay, by such work as Miss Cleaves advocates ; by such work in the upper grades as that insisted upon by Mr. Mathewson for students of mechanical drawing. It will be fostered by such lessons as Miss Hyde gives in Pratt Institute, by such as Mr. Walter Bradley gives in Philadelphia, by such as Mr. Whitney gives in Salem. In a word, Perspective Theory, *raised from the dead*, by a live teacher, must be made the familiar friend of every boy and girl who is expected to draw correctly. Such a companion, "within ourselves" (to use again the words of Dr. Angell) will supply "the dominant portion," when we study Dr. Lukens' "abundant illustrative material." Then we shall profit by it. Such a companion will enable us to set aside the clamorous things and attend to the coy, as Mr. Fitz would have us do. Such a companion would guide Zest, until he led us to achieve Dr. Dewey's "work of art."

¶ February, the shortest month in the year, whose name is derived from an almost forgotten Roman festival of purification (*februare*, to expiate or purify) is itself the least likely of all the months to be forgotten. The business man has to keep his eye on it, for, unlike other months, it shrinks and swells ! The boys and girls hail it as the month of St. Valentine ; the old people as the prophetic month, that which foretells the character of the months to follow. Patriots rejoice in February as the birth month of Washington and Lincoln. Lovers of literature know it as the birth month of Dickens, Victor Hugo, Ruskin, Longfellow, Lowell and Lanier. Scientists recall the fact that Copernicus and Galileo and Darwin were all born in February; and lovers of fine art honor it as the birth month of Guercino,

Messonier, Daubigny, Bartholdi, Mesdag, Winslow Homer, and Elihu Vedder.

The zodiacal sign of the month is Pisces, the twin fishes, logically following the river-making water-man of January. Evidently by special arrangement with St. Valentine, these fishes were once Venus and Cupid, at least so the Greeks affirmed. Frightened by Typhon, a giant, Venus jumped into the Euphrates, with Cupid in her arms, and so got to heaven, through Christian baptism, as the ancient church fathers might have said, the fishes being sure proof thereof.

One form of the sign, taken from a previous number of The School Arts Book, is given on this page. On page 385 is another interpretation of it, from the cover design of "The Stars in Song and Legend"; that on page 395 is from a cover design by F. C. Gordon, for the Outlook.

The birth stone for the month is traditionally the Amethyst, and to this Ruskin agrees, assigning violet, its color, to February in his circuit of zodiacal colors.

> "The February-born will find
> Sincerity and peace of mind;
> Freedom from passion and from care,
> If they the Amethyst should wear."

This seems hardly true in the case of such February-born men as Galileo, Washington, Lincoln, and Lanier, — but perhaps they forgot to wear amethysts!

St. Valentine symbols will be found in abundance in previous February numbers of The School Arts Book. Two others are reproduced herewith from a catalog of a German type

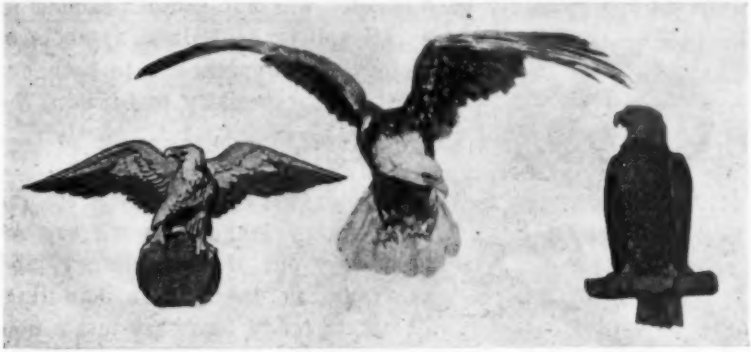
foundry. Miss Weston's symbol of the month, on page 475, is the little New Year grown old enough to regard a heart-shaped cooky.

But in the schools of the United States, the patriotic note is strong in February, on account of the Father and the Liberator of our country. The cover stamp this month is therefore an eagle. That particular bird is a young eagle taken from the interior of a *scutella,* a Roman circular dish, dating from the first or second century. Upon the Bulletin is a decorative form of the eagle adapted from a prospectus of an American banking house.

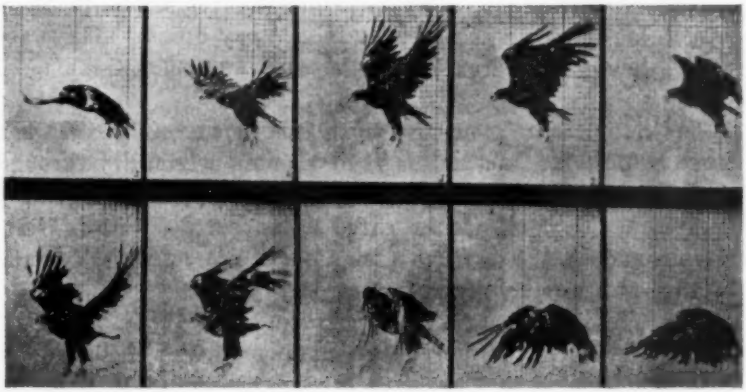
Upon the next page are three other eagles. The central one is from the business stationery of Howard Wesson Engraving Company, of Worcester, Mass., that at the right is a portrait of "Old Abe," and that at the left is from the Flora pavilion, of the Louvre, Paris, designed by Lefuel.

The other plate is a reproduction from a Mybridge photograph of a flying eagle. Some of these views reveal strikingly effective attitudes, notably 1 (upper right), 2, 3, and 4. Conventional forms of the eagle are shown on pages 421 and 409, the latter backed by the old Roman fasces, symbol of senatorial authority and power.

Everywhere in the lower grades the George Washington story will be told again and children will be drawing cherry trees



and hatchets. A good problem in design is to fit a given unit into several different geometric shapes, as shown on page 470. It is also good educative fun to play with symbols to some purpose as illustrated on page 471. Such things add to the interest and beauty of historical papers and covers for biographical booklets. The initials G. W. above the ax might



quite as appropriately be A. L., for was not Lincoln famous as a rail splitter? Palms, symbols of victory, are appropriate to both our great men, especially to Lincoln, the martyr.

Decorative arrangements. The same spray in different shapes.

¶ The drawings by Miss Pretz for the primary language work are refreshingly out of the ordinary, and as frank as daylight in handling. The three teddy bears are just a not-too-bad dream become real! What a wild and wooden creature is that appealing to the Billy Goat! How true to the text is the Pied Piper drawing. A careful rereading of Browning's poem will reveal that the scampering was over by the time they approached the face of the mountain wall. These figures move to their fate as in a happy dream. These are good designs for children to trace or copy and color.

¶ The Supplement gives the sixth instalment of Miss Child's course in Design. As a means of developing originality through what Dr. Ross calls the declension of elements, no more easily operated device has been presented to teachers. There is literally no end to the variety a class of ordinary eighth grade children will produce by this method.

¶ A few weeks ago the educational world was saddened by the announcement of the death of Senator James H. Stout of

Menomonie, Wisconsin, a philanthropic pioneer in Industrial Education, and a passionate lover of beauty. His home was one of the most tasteful in the Northwest. His school is an enduring and ever-growing memorial in his honor, a great fruitful tree of his own planting, which will nourish and cheer the children of many generations. An exhibit of this school will appear in a future number of The School Arts Book.

Playful arrangements of elements associated with George Washington. Suitable for cover ornaments or tail-pieces
H. T. B.

CORRESPONDENCE

Ohio, November 26, 1910.

My dear Mr. Bailey:

I am "keeping shop" at a fair, in a "cut glass" booth. I have plenty of time to think, for salesladies in the cut glass business are not rushed! I brought along an old December number of The School Arts Book to read. Among other things I read about the "supervisor who can deliver the goods." I read with more care than I used to read. To take The School Arts Book doesn't always mean to read it.

One time I heard a sermon on this text: "The Kingdom of Heaven is like leaven which a woman *took* and *hid in three measures of meal.*"

I have been thinking about the art teachers who wear a gray halo. Perhaps you never wear such a one. I hope you don't. It's a good deal less trouble to get one than to buy an Easter bonnet! But no hat ever felt so heavy.

Just at present I am taking a rest from the teaching business. My gray halo is gradually changing to rose color! It seems like a bad dream that I ever cut out thousands of turkeys at Thanksgiving time for little children to color. It's like a bad dream that I ever worried over perspective drawings in the upper grades. Surely I never was concerned about June art exhibits! It seems funny, now, that John didn't have, perhaps, one good drawing to display, and his mother was "very much interested in our public schools." That's a rather trying combination of mother, son, and supervisor!

It commenced with a sluggish liver, and then I lost heart or rather "hope to keep me brave." Even the editorials in The School Arts Book seemed visionary and what was once an inspiration became a dead weight. Can't you tell us how to avoid these sloughs of despond? I have a comfortable home and friends, but I turn cold as I think of those self-sacrificing teachers, — art teachers and grade teachers, too, — who when they reach their Garden of Gethsemane are alone. You smile at my taking things so seriously. But isn't everything serious to a sick body and mind, especially if you are young and not so very wise? Liver pills may help some, but they won't solve the problem!

Now that I sit "ca'mly" at my sale table, away from the clatter of the schoolroom, I think that when *I* start again I shall have a remedy, or rather a preventative, for such woes. To study and think quietly, talk gently and act frankly (if I am *sure* I am on the right track); to be not overmoved by criticism; to be charitable in dealing with teachers whose hobby is The Practical; to be not overly concerned about exhibi-

tions; to be so kind and patient that my influence will help to bring about that rosy future of which we dream, when

"Only the Master shall praise us, and
only the Master shall blame;
And no one shall work for money, and no
one shall work for fame;
But each for the joy of working, and each,
in his separate star,
Shall draw the Thing as he sees it for
the God of Things as they are."

Yours sincerely,

Down-and-Out.

Yes, my friend; your prescription is good as far as it goes, and it goes far enough, but it does not begin low enough. *Mind* your *body!* Get eight hours' solid sleep every night, get good vigorous exercise in the open air at least an hour every day, and eat reasonably three square meals daily. Cut out the extras. Don't worry about anything, ever. Make your outdoor exercises excursions to Nature. Observe her moods, study her doings in tree and shrub, search out her secrets under snow and water, be alert for her beauties. Nature is the antidote for civilization. When the *world* is too much with you, crowd it out with the *earth.* Editor.

Pueblo, Col., November 28, 1910.

My dear Mr. Bailey:

The statement which I heard you make in Denver at the State Teachers' Association meeting — that you had never yet received a Colorado subject from Colorado schools — thus inferring that we do not make use of our environment — quite stirred me up, for I know it to be not the case in District Number One, Pueblo. Therefore, on my return home, I at once gathered together some work — not new, but which for some reason or another had not yet been returned to the pupils — some of it decidedly the worse for wear, and exhibition — and, in my anxiety to correct a wrong impression of us all, am sending it post-haste to you.

One strong point with us is to teach love of environment and I think you will find that our children — though it may not always be true with the grown-ups — do appreciate the wonderful charm of Colorado, of the

desert around us with all its atmosphere of mystery and the wonderful mountains beyond with their ever-changing color, and at evening time the glorious sunsets, than which I think there are none elsewhere grander, more magnificent. I hope you arrived in time to see the one we had Sunday, the day before the meetings began. I think I shall never forget the glory of it.

We carry local interest to such an extent that one year since I have been here, a circus having gone into winter quarters in the town, I persuaded the manager to lend us a baby lion to pose for the children in a near-by building, he himself bringing it, a most wide-awake and playful little beast, in his arms and carrying it from room to room. Imagine the surprise and delight of the children!

I hope you will pardon the enthusiasm which has caused me to take so much of the time of a busy man, but I do not want you to misjudge us. I am aware that I am to blame for your not knowing us in this place, for I realize that I have never before sent you anything. I have grown up under your direction, so to speak, since way back in my Art Institute days in Chicago, and now-a-days The School Arts Book is "ever with me."

Very sincerely yours,

Elsie Leitch Bowman.

My statement was based partly upon local exhibitions of school work which I had seen within the state. I do not recall a single drawing or design from such local plants as the sage-brush, the saxifrage, the tumble weed, the yucca or Spanish bayonet, the alfalfa, erigeron, bee plant, Mexican poppy, or that odd and surprisingly beautiful buffalo grass. The plant forms used are those suggested by drawing books or periodicals published in the east; the landscapes are too often but echoes of eastern landscapes. The trail Miss Bowman is hitting is the right one. The Egyptians built with red sandstone because they had it, the Greeks with pentelic marble because they had that, the French with caenstone, the Dutch with brick, and the Scandinavians with wood, because those materials were available. The results in each case are of permanent significance and of unique beauty. When Velasquez painted the Infanta he may have longed for Greek drapery, but he bravely accepted the hideous court costume of the time and thereby brought fresh laurels to the muse of painting. English painting did not merit the name until West dared

to put modern clothes on British heroes. There is no other road to sound artistic achievement. With what the day brings the artist will achieve success. Has he a rod? With that he shall divide the Red Sea. Has he an ox-goad? With that he shall overcome the Philistines. Has he but five loaves and two fishes? They are sufficient to feed the multitude. A kite and a key were enough for Franklin; an ungainly man in a frock coat and a commonplace arm chair were sufficient for St. Gaudens in the creation of his marvelous Lincoln. Let us lead our children along this ancient way. Let us help them to see their own landscape, their own trees and flowers, and to solve beautifully their own problems.

Editor.

THE ARTS LIBRARY

BOOK REVIEWS AND NOTES

Design in Theory and Practice. By Ernest L. Batchelder. 272 pp. 5 x 8. 66 plates, 154 other illustrations. The Macmillan Company. $1.75 net.

The Principles of Design, Mr. Batchelder's first book, was successful from every point of view, but this second volume is destined to supersede it, for it is at once less technical and more comprehensive. To find a book on design to be recommended universally, a book without a bad or meaningless illustration, sound in principle and sensible in statement, is an experience as comforting as it is rare. A word of comfort (*con-fortis,* to strengthen much) is given to the reader as the author grasps his hand at the front door: "Let us give emphasis to one point at the start. The ability to design is not a secret that Nature has vouchsafed to genius alone. It is quite as much a matter of persistent work as of fortuitous inheritance." Another wise observation is this: "To give thought, that one may do common things uncommonly well, is the first essential toward the achievement of important things." Herein also is wisdom: "The possibilities of any design are to be sought in its limitations, — to shirk or ignore them is to form a dangerous habit." But the whole book is worth quoting! And all its illustrations are worth studying, not only as examples of design, but as examples of effective rendering. The next time a teacher is asked the oft-repeated question, "What is the best single book on design for a layman to read?" he can answer promptly "Batchelder's Design in Theory and Practice." It is best also for teachers, for the author is one of the most successful teachers of design in the United States. It is the best book for arts and craft workers, for the author has been so successful in applying his own principles that he has been forced by the public to give up teaching and to put his entire time into producing beautiful things.

The Whistler Book. By Sadakichi Hartmann. 272 pp. 5½ x 8. 57 illustrations. L. C. Page & Co. $2.50.

Any book by Sadakichi Hartmann is sure to be of more than ordinary interest, because of the author's marked personality; when in addition the book deals with a subject of itself as entertaining as the life and work of the unique Whistler, the result is simply fascinating. From the introductory chapter called "White Chrysanthemums," to the last, "The

Story of the Beautiful," not a dull page is to be found. Here are sample sentences: "All the Old Masters were nursed on the marble breasts of Grecian Goddesses. In all art schools the white corpses of plaster were worshipped on bended knee. The pupils never dared to glance about. They did not see the beauty of the world around them. . . . The new art will be different. It has to be different to equal the old. . . . It will be subtler, more fragile, perhaps, but it will dive deeper into our soul than the cold correctness of older forms and emblems. . . . It was Whistler who proved that art is synonymous with hard work. . . . It was Whistler who proclaimed that art cannot be taught but must be an inborn gift. . . . Whistler disclosed new harmonies of tone, of arrangement, and visual poetry . . . and created a new art form that may be destined to rule for the next thousand years." The chapter on "Symphonies in Interior Decoration" is especially illuminating. One feels upon finishing the book that he has become acquainted with the real Whistler, the man who "invariably preferred beauty to comfort," . . . "one of the chosen — with the mark of the gods upon him — who had to continue what had gone before." Among the famous works reproduced are The Princess of the Porcelain Land, The Falling Rocket, Old Battersea Bridge, Sarasate, Miss Alexander, Thomas Carlyle, The Artist's Mother, Little Rose. The Japanese Dress, The Fiddler, The Pool, The Archway in Venice, Black Lion Wharf, and shutter from the Peacock Room. A Bibliography, including a list of the principal magazine articles, a list of the "Nocturnes," a complete Index, and a photogravure reproduction of Baldini's portrait of Whistler, give to the volume a completeness which places it among the standard biographies of master artists.

Die Technik des Tafelzeichnens. By Ernst Weber. 40 plates. 8 x 10½, with handbook. Second edition, 1910. B. G. Teubner, Leipzig. $2.50.

This Technique of Blackboard Drawing is more comprehensive than anything yet published in the United States. Beginning with the typical strokes of the crayon the plates show the method of representing texture, of securing various effects (light on dark, dark on light) and of interpreting all sorts of objects, including landscapes and portraits, in color. The plates exemplify also the use of illustration in connection with physiology, geography, history, literature, nature study, physics, etc.

The plates are excellent from several points of view. They are direct, frank, and on the whole, good in color: but they are too good! In common with all other publications dealing with blackboard drawing, they tempt teachers to waste valuable time, and seduce them into a blind alley. Any blackboard drawing which draws attention to itself, which by its character begs to be "saved," is likely, in the hands of an unskilled teacher, to become pernicious. The very nature of the medium provokes a kind of drawing that leads nowhere. Beyond the quick, graphic. evanescent blackboard illustration, stands the sign *Impasse.*

Children's Classics in Dramatic Form. Book IV. By Augusta Stevenson. 212 pp. 5 x 7½. Illustrated. Houghton Mifflin Company. 50 cents.

Miss Stevenson's presentation of these stories is the result of experience as a successful teacher in the public schools of Indianapolis. Sixteen stories, from Persephone to Daniel Boone, all important in the education of children, are graphically staged, with a dozen full-page line illustrations by Clare E. Atwood. The book will be welcomed by all who are interested in dramatizing as the basis for fine use of the voice, and free use of the pencil and other tools in constructive and decorative art.

Beowulf, and A Knight of Arthur's Court. Two books by John Harrington Cox. 94 pp. 5 x 7½. Illustrated. Little, Brown & Company. Each 50 cents.

These are excellent as supplementary reading. Beowulf and Gawain are favorites with children in the elementary grades, and are here presented simply and convincingly. The illustrations, in half-tone, by Frank T. Merrill, are sufficiently correct archeologically, and sufficiently faithful to the text, good enough in drawing and full enough of life, to be welcome additions to the stories.

How to Read Character in Handwriting. By Mary H. Booth. 72 pp. 4½ x 7. Illustrated. John C. Winston Company, Philadelphia. 50 cents.

A little book of recreation for the hard-working teacher of penmanship! If reading is "mental disputation," here is a chance to read. Some

of the specimens of handwriting are of great interest as examples of "style."

Paper Colors. A game of geography and art. Milton Bradley Company. 25 cents.

A box containing four carbon-outlines, twenty-eight sheets of colored paper and a book of directions, constitutes the outfit for a kind of paper cutting which will afford children pleasure, and a good bit of hand training. Conventional pictures and maps are the result. The game offers suggestions which might lead, under a skilful teacher, to some good language work.

The latest number of HANDARBEIT, that handsome and richly-suggestive little quarterly published by B. G. Teubner, Leipzig, deals with the making of puppets, floats, circus scenes, and merry-go-rounds, means of transportation, houses, rooms, mills and other things in miniature. These are shown in seven full-page half-tone plates. Handarbeit costs four marks a year.

THE EDUCATIONAL BI-MONTHLY, issued by the Chicago Normal School Press, is full of good things these days. The last October number contained articles on Design, Construction, Bookbinding, Printing, Textiles, and Wood-block Printing.

AN ART-CRAFT INDEX TO THE JANUARY MAGAZINES

PERTINENT ARTICLES

A Course in China Decoration, Jetta Ehlers, Keramic Studio, VII, Use of Lustres, (Dec.), p. 160; VIII, Raised Paste, (Jan.), p. 184.

Architectural Illustration, III, The Illustration of Architecture for the Architect Frank Chouteau Brown, Printing Art (Dec.), p. 267.

Art and Influence of El Greco, The, Charles H. Caffin, Art and Progress, p. 77.

Art and the Book, Early Book Illustrations: Title-pages, W. E. Sparkes, Practical Teacher, p. 467.

A Western Art Exhibition, James Spencer Dickerson, World To-day, p. 65.

A Word for Water Colors, L. M., Art and Progress, p. 81.

Boucher: The Pet Artist of Madame de Pompadour, James William Pattison, House Beautiful (Dec.), p. 8.

Church Building and Decoration in America, II, William Laurel Harris, Art and Progress, p. 74.

Color in Decoration, Frank Alvah Parsons, Arts and Decoration (Dec.), p. 77.

Drawing in Public Elementary Schools. Tillmouth Council School, Cornhill-on Tweed, III, David Summerson, Practical Teacher, p. 474.

Early Oriental Rugs, An Exhibition at the Metropolitan Museum, Art and Progress, p. 70.

Early Upholstery, Virginia Robie, House Beautiful, I, Dec., p. 6; II, Jan., p. 59.

Harmonies in Type, James Cheesman, Printing Art, p. 350.

Harmony of Colors, VIII, Combinations with Blue, J. F. Earhart, Inland Printer, p. 570.

History Lesson and Drawing, Heraldry, W. H. Elgar, Practical Teacher, p. 460.

Italian Fountains, E. LeBlond, House Beautiful, p. 41.

James Paterson, R. S. A., R. W. S., Marion Hepworth Dixon, International Studio, p. 190.

Johnson's London, Percy Holmes Boynton, Chautauquan, p. 175.

Keck, Charles, Art and Progress, p. 73.

Le Vignette, William P. Bodwell, Printing Art, p. 357.

Lichfield, Kate Fisher Kimball, Chautauquan, p. 200.

Metropolitan Museum of Art Printing Press, The, H. W. Kent, Printing Art, p. 369.

Modern Mural Decoration in America, Selwyn Brinton, M. A., International Studio, p. 175.

National Academy Winter Exhibition, The, Arthur Hoeber, International Studio, p. LXIV.

On a Collection of Drawings by Rembrandt and the Old Masters, Frederic Lees, International Studio, p. 213.

On Albert P. Ryder, Walter Pach, Scribner, p. 125.

Painters of the Sea, Martin Sheppard, Arts and Decoration (Dec.), p. 69.

Pewabic Pottery, The, Helen Plumb, Art and Progress, p. 63.

Pratt, Bela L., Art and Progress, p. 76.

Precious Stones: Their Manipulation and Application in the Arts, George F. Kunz, Handicraft, p. 347.

Printing Page Problems with Geometric Solutions, Harry Lyman Koopman, Printing Art, p. 353.

Scientific Color in Practical Printing, X, The Union of Hue, Value and Chroma in the Color Solid, E. C. Andrews, Inland Printer, p. 552.
Simple Class Woodwork, F. E. Melton, Practical Teacher, p. 446.
Some Ancient Swiss Coffers, A. S. Levetus, International Studio, p. 202.
Suggestions for Constructive Work in Connection with Object Lessons, Felix T. Kingston, Practical Teacher, p. 471.
Simple Crafts for Secondary Schools, Pottery, J. Young, Practical Teacher, p. 458.
Ter Meulen, a Painter of Sheep, R. C. Vose, Arts and Decoration (Dec.), p. 72.
Walker, Painter of American Peasants, J. Nilsen Laurvik, Arts and Decoration (Dec.), p. 63.
Watermarking of Paper, The, Sidney A. Kimber, Printing Art (Dec.), p. 257.
Winslow Homer, Christian Brinton, Scribner, p. 9.
Work of Frederick Ballard Williams, The, Leila Mechlin, International Studio, p. liii.
World's Famous Modern Pictures, The, Painted in the 18th and 19th centuries, R. Edmund Adolph, Ladies' Home Journal, p. 10.

ILLUSTRATORS

Adams, Herbert, Art and Progress, p. 74.
Alexander, John W., International Studio, pp. 178-183.
Bartlett, Frederic C., House Beautiful (Dec.), p. 1.
Beard, Adelia B., St. Nicholas, pp. 250-253.
Berger, W. M., Scribner, pp. 45-52.
Betts, Ethel Franklin, Printing Art, p. 352.
Birch, Reginald, St. Nicholas, pp. 220-227.
Booth, Hanson, McClure, frontispiece, pp. 278-285.
Bouguereau, William, Printing Art (Dec.), p. 274.
Brangwyn, Frank, A. R. A., R. E., International Studio, pp. 226, 227, 251.
Bransom, P., Outlook, pp. 943-949.
Brock, C. E., McClure, p. 323.
Browne, Katharine M., St. Nicholas, pp. 204-207, 286.
Campbell, Blendon, Scribner, frontispiece.
Castaigne, Andre, Century, p. 450.
Cave, Edna S., Keramic Studio (Dec.), supplement.
Chase, Joseph Cummings, McClure, pp. 303-309.
Chase, William M., Century, p. 413.
Cleland, T. M., McClure, pp. 289, 294.
Cole, Timothy, Century, p. 423.
Crowninshield, Frederic, Art and Progress, p. 75.
Denis, Maurice, International Studio, pp. 236-238.
Dibble, Mabel C., Keramic Studio, supplement.
Drolling, Martin, Century, p. 423.
El Greco, Art and Progress, p. 79.
Fancher, Louis, Century, pp. 480, 481.
Fisher, Harrison, Ladies' Home Journal, cover.
Flagg, James Montgomery, Scribner, pp. 102-115.
Fraser, Malcolm, Century, p. 395.

Gassaway, Katharine, St. Nicholas, p. 265.
Griggs, F. L., Printing Art (Dec.), p. 270.
Gruger, F. R., Century, pp. 340, 446.
Guipon, Leon, Century, p. 338.
Hals, Franz, Arts and Decoration (Dec.), cover.
Hambidge, Jay, McClure, p. 334.
Herford, Oliver, Century, p. 482.
Hiro-Shige, Printing Art, p. 348.
Homer, Winslow, Scribner, pp. 11-22.
Hunt, William Morris, Art and Progress, frontispiece.
Kaempfer, Century, pp. 365-371.
Kendrick, Sydney, St. Nicholas, p. 212.
Kerr, George F., Good Housekeeping, p. 69.
King, Jessie M., International Studio, p. 233.
King, W. B., Century, p. 380.
La Farge, John, International Studio, pp. 175-177.
Lester, C. F., St. Nicholas, p. 249.
Lie, Jonas, Century, pp. 390, 391.
Little, Arthur, American Magazine, frontispiece, pp. 293-300.
McConnell, Emlen, Ladies' Home Journal, p. 7.
McCutcheon, John T., American Magazine, pp. 394-397.
Merrick, Arthur T., St. Nicholas, pp. 215, 216.
Mowat, H. J., American Magazine, pp. 370-376, 410-417.
Newell, Peter, Ladies' Home Journal, p. 18.
Nichols, H. D., Century, p. 372.
Nordfeldt, B. J. O., Outlook, pp. 968-977.
Oakley, Violet, International Studio, pp. 186-188.
Parker, Cushman, Good Housekeeping, cover.
Parrish, Maxfield, International Studio, frontispiece, Printing Art (Dec.), p. 268; (Jan.), frontispiece.
Paterson, James, International Studio, pp. 190-202.
Pearce, Charles Sprague, International Studio, p. 185.
Peirson, J. Alden, St. Nicholas, frontispiece, pp. 195, 228.
Pennell, Joseph, Printing Art (Dec.), p. 269.
Perrett, Galen J., Good Housekeeping, pp. 48, 49; St. Nicholas, pp. 258-261.
Piexotto, E. C., Printing Art (Dec.), p. 268.
Popini, Alexander, Century, pp. 415-421.
Poucher, Edward, Good Housekeeping, pp. 18, 19.
Pratt, Julie C., St. Nicholas, pp. 256, 257.
Preston, James, Good Housekeeping, pp. 12, 13.
Preston, May Wilson, Century, pp. 352-361; Good Housekeeping, frontispiece.
Priolean, Mme. E., International Studio, p. 233.
Raleigh, Henry, McClure, pp. 262-275.
Relyea, C. M., Ladies' Home Journal, p. 15; St. Nicholas, pp. 209, 210, 241, 242.
Rembrandt, International Studio, pp. 213-221.
Rose, J. M., St. Nicholas, p. 254.
Rothenstein, Albert, International Studio, pp. 228, 229.
Ryder, Albert P., Scribner, pp. 125-127.

Sargent, John S., R. A., International Studio, p. 184.
Sarka, Charles, American Magazine, pp. 333-336.
Schabelitz, R. F., American Magazine, pp. 343-347.
Scott, W. J., St. Nicholas, p. 263.
Seton, Ernest Thompson, Scribner, pp. 64-71.
Sigsbee, Mary Ellen, American Magazine, cover.
Simmons, Edward, International Studio, pp. 186-189.
Smith, Sarah K., St. Nicholas, p. 211.
Stearns, Fred, House Beautiful, cover.
Stephens, Alice Barber, American Magazine, pp. 362-368; Ladies' Home Journal, p. 13.
Storer, F. E., St. Nicholas, pp. 244-246.
Ter Meulen, François Pieter, Arts and Decoration (Dec.), pp. 72, 73.
Tittle, Walter, Ladies' Home Journal, p. 20.
Townsend, Harry, American Magazine, pp. 313-318.
Trezise, F. J., Inland Printer, frontispiece.
True, Allen Tupper, Scribner, pp. 93-99.
Varian, George, Century, pp. 458, 462, 466; St. Nicholas, pp. 199, 201, 219, 248.
Walker, Horatio, Arts and Decoration (Dec.), pp. 63-65.
Walton, Frederick C., House Beautiful (Dec.), cover.
Wiles, Irving R., Century, frontispiece.
Williams, Frederick Ballard, International Studio, pp. liii-lix.
Williams, J. Scott, American Magazine, pp. 380-391; St. Nicholas, pp. 234, 235.
Woodbury, Charles, Arts and Decoration (Dec.), frontispiece.
Wyeth, N. C., Scribner, p. 24.
Yohn, F. C., McClure, pp. 327-330.

COLOR PLATES

A Plate of Fish, William M. Chase, Century, p. 413.
Argonauts in Quest of the Golden Fleece, The, Maxfield Parrish, Printing Art, frontispiece.
Brother and Sister, William Bouguereau, Printing Art (Dec.), p. 275.
Buccaneers, The, Frank Brangwyn, A. R. A., International Studio, p. 251.
Butterflies, Printing Art, p. 364.
Couch Covers, Ladies' Home Journal, p. 28.
Cover Design, Harrison Fisher, Ladies' Home Journal.
Cover Design, Cushman Parker, Good Housekeeping.
Cover Design, Frederick C. Walton, House Beautiful (Dec.).
Heraldry, Coats-of-arms, Practical Teacher, p. 460.
How Four Queens found Sir Lancelot in the Woods, Embroidered panel designed by Jessie M. King; worked by Mme. E. Prioleau, International Studio, p. 233.
It was hard to remember that he was only the wandering leader of an Arab caravan, N. C. Wyeth, Scribner, p. 24.
Japanese Woodcut Print, Hiro-Shige, Printing Art, p. 348.
Larkspur, Edna S. Cave, Keramic Studio (Dec.), supplement.

Last of the Indomitable, The, James Paterson, R. S. A., R. W. S., International Studio, p. 191.
Madame Gerville-Réache as "Carmen," Irving R. Wiles, Century, frontispiece.
Madeleine, James Paterson, R. S. A., R. W. S., International Studio, p. 197.
Old King Cole, Maxfield Parrish, International Studio, frontispiece.
Orange Tree Fruit Plate, Mabel C. Dibble, Keramic Studio, supplement.
Our Alarm Clock, Cover Design, Mary Ellen Sigsbee, American Magazine.
Patchwork Quilts, Ladies' Home Journal, p. 25.
Pottery: Buttons, Heads of Hatpins, etc., Practical Teacher, p. 457.
Rag Rugs, Ladies' Home Journal, p. 27.
So the Sad Shepherd thanked them for their entertainment, Blendon Campbell, Scribner, frontispiece.
Students' Drawings, Practical Teacher, p. 477.
Swans, The, Ethel Franklin Betts, Printing Art, p. 352.
Woven Pillows, Ladies' Home Journal, p. 26.

NOTABLE DESIGNS

Bags, embroidered, Home Needlework, pp. 450, 451.
Booklet covers, Inland Printer, pp. 561, 562.
Candlestick, Oak, Handicraft, frontispiece.
China Decoration, Keramic Studio (Dec.), pp. 162-181; (Jan.), pp. 184-205.
Choir Stall, International Studio, p. 212.
Christmas Tokens, Printing Art (Dec.), pp. 287-296.
Coffers, Swiss, International Studio, pp. 203-211.
Couch Covers, Ladies' Home Journal, p. 28.
Cupboard, Gothic, International Studio, p. 211.
Cut Leather, Home Needlework, pp. 426, 427.
Embroidery, Home Needlework, p. 423, etc.; International Studio, p. 233.
Hand-lettered Forms, Printing Art, pp. 377-384.
Lettering, Inland Printer, frontispiece.
Oriental Rugs, Art and Progress, pp. 70, 71.
Pages from Catalogs, Printing Art (Dec.), p. 266, etc.
Patchwork Quilts, Ladies' Home Journal, p. 25.
Pottery, Art and Progress, pp. 63, 67; International Studio, pp. 243-245.
Printers' Marks, Inland Printer, p. 544.
Rag Rugs, Ladies' Home Journal, p. 27.
Sewing or Writing Table, International Studio, p. 212.
Silhouettes, Ladies' Home Journal, p. 35.
Simple Class Woodwork, Practical Teacher, p. 447.
Stenciled Curtains, Ladies' Home Journal, p. 49.
Title-pages, Practical Teacher, p. 470; Printing Art, p. 352.
Toy Menagerie, International Studio, p. 242.
Watermarks, Printing Art (Dec.), pp. 257-266.
Woven Pillows, Ladies' Home Journal, p. 26.

THE SCHOOL ARTS GUILD

I WILL TRY TO MAKE THIS PIECE of WORK MY BEST

DECEMBER CONTEST

AWARDS

FOR A CHRISTMAS PROBLEM. — Open to Primary and Grammar Pupils.

First Prize, a copy of Nature Drawing, edited by Mr. Bailey, and the Badge with Gold Decoration.

Melville Grey, VIII, Hardie School, Beverly, Mass.

Second Prize, a copy of Thirteen Good Animals, by Keller, and the Badge with Silver Decoration.

* Emma Brummel, Lincoln School, Ottawa, Ill.
Peter Dortch, VI, Pleasant Street School, Westerly, R. I.
Marion Porter, VIII, Prospect School, Beverly, Mass.
Helen Salkins, VII, Salem Normal Practice School, Salem, Mass.
Clinton Storkley, Hamilton School, Calumet, Mich.

Third Prize, a Lettering Packet, and the Badge of the Guild.

Alonzo E. Barnes, VII, 414 East Livingston Street, Pontiac, Ill.
Beatrice Beyankee, IV, Pleasant Street School, Westerly, R. I.
Mabel Connolly, IX, Centre School, Malden, Mass.
Esther Fielder, VII, Prospect School, Beverly, Mass.
Christine Hunnicutt, III, Meridian, Miss.
Olive Kerz, VIII, Washington School, Ottawa, Ill.
*Mildred Lanphear, Avondale School, Westerly, R. I.
Annie Preston, VIII, Ryal Side School, Beverly, Mass.
Mabel Travis, 118 South Cherry Street, Poughkeepsie, N. Y.
Lena Uksila, VIII, Charles Briggs School, Calumet, Mich.

Fourth Prize, the Badge of the Guild.

Alma Apruzzese, VI, District No. 5, Bristol, Conn.
Nina Barker, Irving School, East St. Louis, Ill.
Joseph Boerio, II, Latrobe, Pa.
Viola Brooks, Irving School, East St. Louis, Ill.
Orma Brown, VII, Manassas, Va.
Marie Buys, III, North Riverside, Sioux City, Ia.
H. Dahms, Poughkeepsie, N. Y.

* A winner of honors in some previous contest.

Mary Digilio, Town omitted.
*Nannie Graham, III, East End School, Meridian, Miss.
Gardiner Hill, V, Pleasant Street School, Westerly, R. I.
Helen Ingalls, 253 Pearl Street, Reading, Mass.
Inez Johnson, San Angelo, Texas.
Lempie Kiltala, III, Hawthorne School, Laurium, Mich.
Irma Kingsley, VIII, Salem Normal Practice School, Salem, Mass.
Clarence Knudson, III, Hardie School, Beverly, Mass.
Bessie Lane, VII, Reading, Mass.
Hyman Levich, II, 315 West Eighth Street, Sioux City, Iowa.
Gladys L. Lynch, II, District No. 5, Bristol, Conn.
Josephine Norton, VIII, Pontiac, Ill.
Eunice Sampson, III, 314 West Sixth Street, Sioux City, Iowa.
Marion Schwenk, III, Park Avenue School, Westerly, R. I.
Rose Stussi, VIII, Hawkins School, Swissvale, Pa.
*Alfred Taylor, VIII, Washington School, Ottawa, Ill.

Special Prize, a Guild Motto Card.

Preliminary and First Grades, Armstrong School, Sioux City, Iowa.
Grade I, Shabbona School, Ottawa, Ill.
Grade II, Shabbona School, Ottawa, Ill.
Grade VII, Salem Normal Practice School, Salem, Mass.

Honorable Mention, a Recognition Card.

Morton Ambler, Reading, Mass.
Malia Bernasconi, Westerly, R. I.
Nanny Blackwood, Laurium, Mich.
Esther Bushey, Guthrie, Okla.
Lloyd Cain, Sioux City, Iowa.
William Campbell, Reading, Mass.
Hazel Carlisle, East St. Louis, Ill.
Annelle Carney, Meridian, Miss.
Louise De Normandie, Malden, Mass.
Irene Dube, Bristol, Conn.
Lloyd W. Fraser, Noank, Conn.
George Gassett, Hopkinton, Mass.
Mary Gentile, Westerly, R. I.
Joseph Gladis, Bristol, Conn.
Mary Gomena, Westerly, R. I.
Thelma Grose, Beverly, Mass.
Harold Harvey, Calumet, Mich.
Eleanor Hay, Ottawa, Ill.
Minnie Kahn, Poughkeepsie, N. Y.
Thomas Klimas, Newington, Conn.
Freddie Krough, Laurium, Mich.
Harriett Kruse, Ottawa, Ill.
Walter Larson, Calumet, Mich.
Annie Lawrence, Westerly, R. I.
Esther Levich, Sioux City, Iowa.
Mabel Moe, Sioux City, Iowa.
Harold Moran, Reading, Mass.
Harry Munn, Bristol, Conn.
Gladys Nash, Westerly, R. I.
John Nye, Westerly, R. I.
Reginald Oppy, Westerly, R. I.
William E. Owens, Westerly, R. I.
Arline Pindar, Malden, Mass.
Mary Pingalori, Westerly, R. I.

* A winner of honors in some previous contest.

Margaret Piper, Swissvale, Pa.
George Pyburn, Salem, Mass.
Carleton Reid, Sioux City, Iowa.
John Schariger, Laurium, Mich.
Ruth Scott, Beverly, Mass.
Arthur Smith, Beverly, Mass
Edward Smith, Sioux City, Iowa.
Jean Stevens, Sioux City, Iowa.
Bessie A. Thayer, Pontiac, Ill.
Mary E. Torrance, Pontiac, Ill.
Harold Underhill, Poughkeepsie, N. Y.
Stella Whiteman, Guthrie, Okla.
Sarah Young, Pontiac, Ill.
Alton Zimmerman, Swissvale, Pa.
Beatrice ———, II, Garfield School, East St. Louis, Ill.
Clinton ———, I, Longfellow School, East St. Louis, Ill.
Wallace ———, II, Horace Mann School, East St. Louis, Ill.

The work submitted under the rules of the contest for December easily fell into two classes, that which conformed to the conditions specified, and that which did not. Of course that which did not comply with the conditions was comparatively small in amount, but nothing is small to those who contribute, and this statement is made as an explanation of the apparent oversight on the part of the jury.

The Christmas work was by far the best yet submitted. There were fewer love-knot bindings and crazy devices, less inharmonious color, and less slipshod work than in any previous year. For such a condition of things we should be thankful and therefrom gather courage for the new year.

Please remember the regulations.

Pupils whose names have appeared in The School Arts Book as having received an award, must place on the face of every sheet submitted thereafter a G, for (Guild) with characters enclosed to indicate the highest award received, and the year it was received, as follows:

These mean, taken in order from left to right, Received First Prize in 1905; Second Prize in 1906; Third Prize in 1907; Fourth Prize in 1906; Mention in 1907. For example, if John Jones receives an Honorable Mention, thereafter he puts M and the year, in a G on the face of his next drawing submitted. If on that drawing he gets a Fourth Prize, upon the next drawing he sends in he must put a 4, and the date and so on. If he should receive a Mention after having won a Second Prize, he will write 2 and the date on his later drawings, for that is the highest award he has received.

☞ Those who have received a prize may be awarded an honorable mention if their latest work is as good as that upon which the award is made, but no other prizes unless the latest work is better than that previously submitted.

☞ The jury is always glad to find special work included, such as language papers upon subjects appropriate to the month, home work by the children of talent, examples of handicraft, etc.

☞ Remember to have full name and mailing address written on the back of each sheet. Send the drawings flat.

☞ If stamps do not accompany the drawings you send, do not expect to obtain the drawings by writing for them a month later. Drawings not accompanied by return postage are destroyed immediately after the awards are made.

☞ A blue cross on a returned drawing means "It might be worse!" A blue star, fair; a red star, good; and two red stars, — well, sheets with two or three are usually the sheets that win prizes and become the property of The National Arts Publishing Company.

PROFESSION-TRADE ITEMS

Mr. Harry W. Jacobs, Supervisor of Drawing and Handicraft, Poughkeepsie, N. Y., spent his Christmas vacation on the coast of Massachusetts.

The Milton Bradley Company has issued an effective advertising calendar, designed by Miss Edith M. Shepard, of Roxbury, printed in two colors on colored papers.

The National Municipal League, thru a committee on School Extension, has been investigating the possibilities of the schoolhouse as a more efficient means of public betterment.

The students of Pratt Institute gave a brilliant performance recently for the benefit of the Art Students' Fund Association, which consisted of a series of tableaux and sketches called, A Festival of the Year.

Miss Charlotte Reed, of Ontario, California, has secured the coöperation of the librarian of the children's department in the making of special studies in illustration bearing on the problem of picture study in schools.

Mr. Charles A. Lawrence, a graduate of the Massachusetts Normal Art School, and formerly manager of the Eric Pape School of Art, has opened a drawing school in Lynn, Mass., with both day and evening classes.

Mr. Edward Robinson, formerly associated with the Museum of Fine Arts, Boston, and later the associate of Sir Caspar Purdon Clark of New York, has recently been appointed the Director of the Metropolitan Museum of Art.

The second Annual Report of the American School Peace League may be now secured thru Mrs. Fannie Fern Andrews, 405 Marlborough Street, Boston, Mass. It contains valuable suggestions for the celebration of Peace Day, May 18th.

Mr. Frank Alvah Parsons, Director of the New York School of Fine and Applied Art, not only manages a successful school this winter, but is maintaining a series of lectures in Newark and Trenton, and classes on Interior Decoration and on Advertising in New York City.

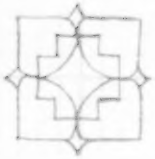
The Sloyd Training School of Boston, under the direction of Mr. Gustaf Larsson, is now located at 7 Harcourt Street. Four hundred teachers have been sent out from this school, and more than four hundred thousand children are now under the instruction of its graduates. Ten sloyd centers have been established in South India and six in Mexico during the last three years.

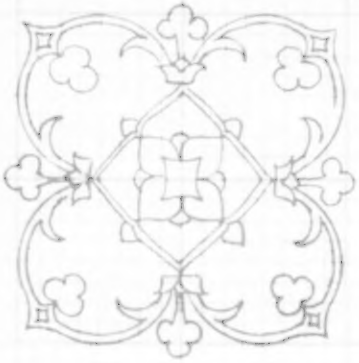
The Department of Agriculture has issued an illustrated pamphlet on forest nurseries for schools, by Walter M. Moore and Edwin R. Jackson. It is Bulletin No. 423. The extension of nature study in this direction will react favorably upon the drawing.

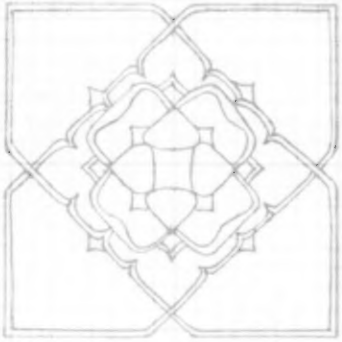
The Fifth Street Grammar School, New Bedford, Mass., has recently issued an art catalog of twenty-two pages containing a complete list of its decorations. This school was the first school in the country to raise the United States flag and make the use of it a permanent feature of public school administration (May, 1861).

Mr. Michael Carr, an honor student of the Slade Art School, London, has been secured as an associate instructor with Mr. John S. Ankeney, Jr., of the Department of Theory and Practice of Art, University of Missouri. This university is a leader in collegiate courses in art. It has just installed a new press for the printing of woodcuts.

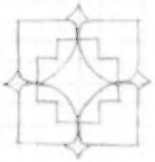
The Art Teachers Club of New York State, at its recent meeting in Rochester, had as the topics for special discussion, the new requirements of the State Education Department, and the restoring by the Board of Regents of the old standard of seventy-five percent. in drawing which is based somewhat upon the demands of the business world.

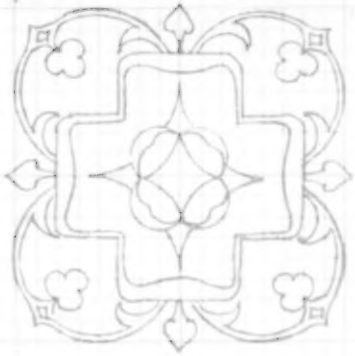


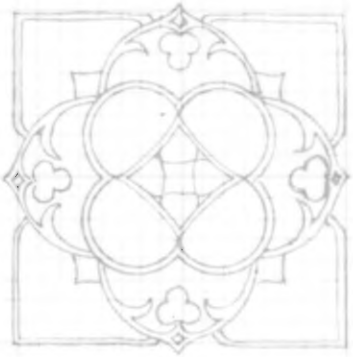




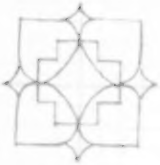
TWENTY THIRD EXERCISE
THE ENLARGED UNITS OF
ELEVENTH EXERCISE
TREATED AS AN OUTLINE
PATTERN

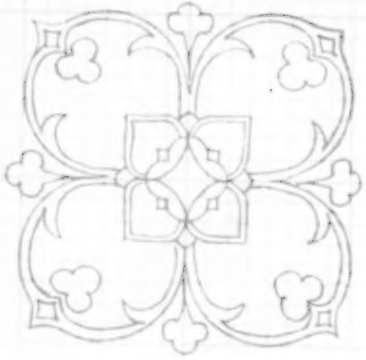


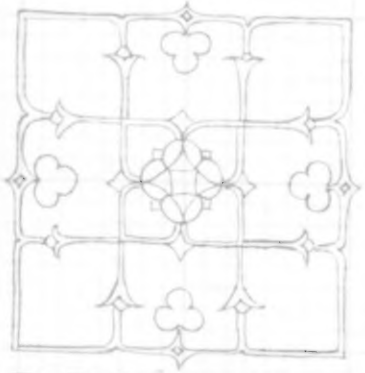




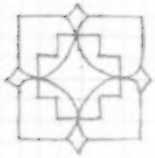
TWENTY FOURTH EXERCISE
THE ENLARGED UNITS OF
TWELFTH EXERCISE
TREATED AS AN OUTLINE
PATTERN

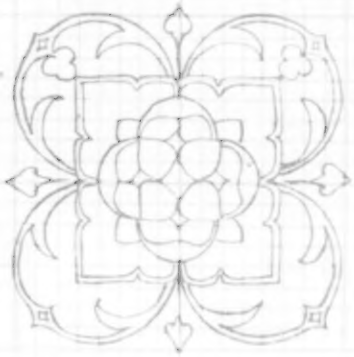


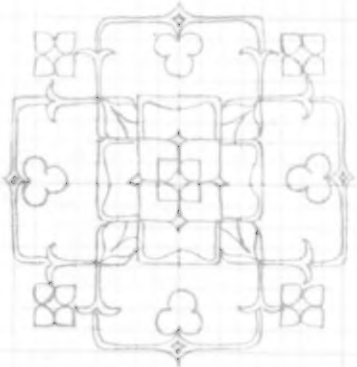




TWENTY FIRST EXERCISE
THE ENLARGED UNITS OF
NINTH EXERCISE
TREATED AS AN OUTLINE
PATTERN

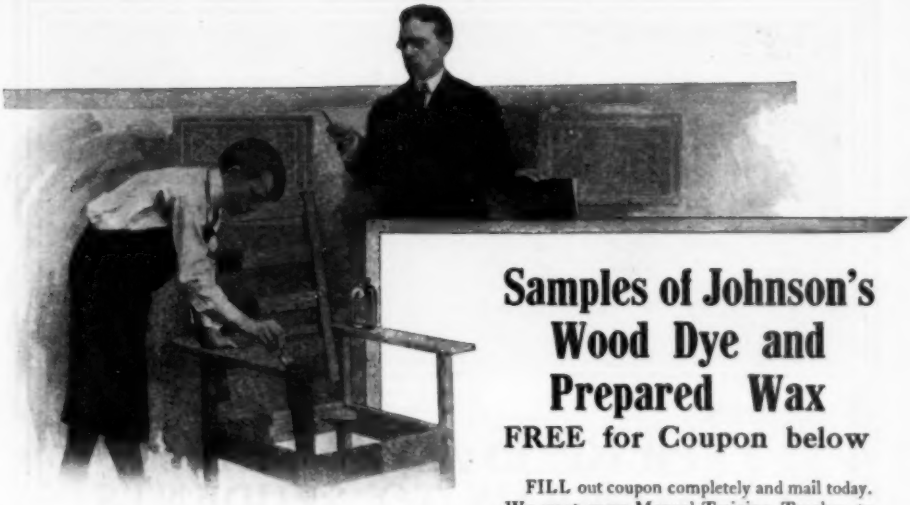






TWENTY SECOND EXERCISE
THE ENLARGED UNIT OF
THE TENTH EXERCISE
TREATED AS AN OUTLINE
PATTERN

ms by Miss Katherine B. Child



Samples of Johnson's Wood Dye and Prepared Wax

FREE for Coupon below

FILL out coupon completely and mail today. We want every Manual Training Teacher to try Johnson's Wood Dye and Prepared Wax at our expense. Johnson's Wood Dye should be used for finishing models. It is easily and quickly applied by any one. It dries in a few minutes. Models should not be finished with an ordinary stain which only gives the wood a surface coating and hides its natural beauty. Johnson's Wood Dye sinks deep into the wood and adds beauty to the grain.

JOHNSON'S WOOD DYE

is made in 14 attractive shades as follows:

No. 126 Light Oak	No. 128 Light Mahogany	No. 121 Moss Green
No. 123 Dark Oak	No. 129 Dark Mahogany	No. 122 Forest Green
No. 125 Mission Oak	No. 130 Weathered Oak	No. 172 Flemish Oak
No. 140 Manila Oak	No. 131 Brown Weathered Oak	No. 178 Brown Flemish Oak
No. 110 Bog Oak	No. 132 Green Weathered Oak	

JOHNSON'S PREPARED WAX

Should be applied over the Dye to give the model a permanent, subdued rich finish which will not mar or show scratches. Johnson's Prepared Wax comes in paste form. Apply it lightly with a cloth. It will dry in five minutes. Then polish with a clean, dry cloth. It produces a beautiful, dull, artistic finish. Just the thing for Mission Pieces. Johnson's Prepared Wax should also be used in your home for polishing the woodwork, floors and furniture, including the piano.

FREE WOOD PANELS TO TEACHERS

Upon request we will also gladly send teachers a set of Johnson's Wood Panels, showing just what beautiful results are obtained by the use of Johnson's Wood Dye and Prepared Wax.

Cut Coupon Here

I accept your offer of samples of Johnson's Prepared Wax and Wood Dye, shade No. ..... Also copy of your book. I agree to test samples and report results. Name of store where I buy Manual Supplies is:

.....

.....

My Name .....

Address .....

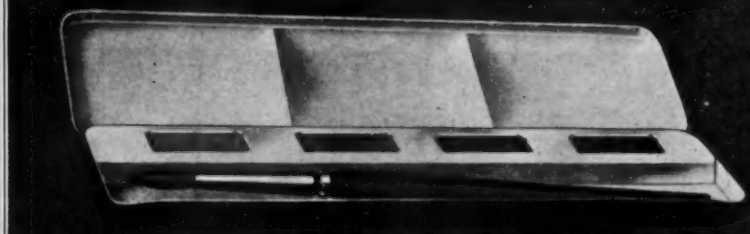
.....

S.A.B.-2

S. C. Johnson & Son

"The Wood Finishing Authorities"

Racine, Wis.



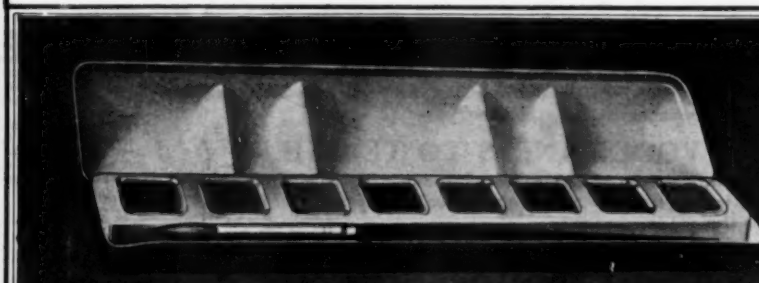
No. 4065
4 DRY CAKES · UNRIVALED IN MIXING
QUALITY TO PRODUCE TRUE SECONDARY COLORS

THERE IS AN INTEREST
STIMULUS TO STUDENTS
WORKING WITH OUR
AMERICAN COLORS

AMERICAN COLORS WORK FREELY
AND DRY UNIFORMLY WITH NO DEPOSIT,
LEAVING FULL, CLEAN COLOR VALUES

SAMPLE OF EITHER BOX SENT PREPAID FOR 25c. OR FREE TO SUPERINTENDENTS OR SUPERVISORS. WRITE FOR CATALOGUE

THE AMERICAN CRAYON COMPANY
SANDUSKY, OHIO, AND WALTHAM, MASS., U. S. A.



No. 4068
8 SEMI MOIST COLORS - FIVE PANEL COVER No. 8 BRUSH

Higgins'

DRAWING INKS
ETERNAL WRITING INK
ENGROSSING INK
TAURINE MUCILAGE
PHOTO-MOUNTER PASTE
DRAWING-BOARD PASTE
LIQUID PASTE
OFFICE PASTE
VEGETABLE GLUE, ETC.

ARE THE FINEST AND BEST INKS AND ADHESIVES

Emancipate yourself from the use of corrosive and ill-smelling inks and adhesives and adopt the **Higgins' Inks and Adhesives.** They will be a revelation to you, they are so sweet, clean and well put up.

At Dealers Generally

Chas. M. Higgins & Co., Mfrs.
271 Ninth Street, Brooklyn, N. Y.
Branches: Chicago, London

INSTRUCTION BY MAIL IN
Designs for Leather Craft
DINNER AND MENU CARDS

Water Color work of every description. Terms reasonable, write for suggestions.
Teacher of Life and Water Color Classes at Chautauqua, summer of 1907.
Supervisor of Drawing eight years.

MRS. LAURA M. BOOTH
2124 East 107th Street Cleveland, Ohio

CHASE CLASS IN ITALY
Sixth Season in Europe
INSTRUCTOR
WILLIAM M. CHASE
Under the personal direction of C. P. TOWNSLEY, formerly Director of The London School of Art
"A most exceptional opportunity for Art Study at less than the cost of the ordinary Art Tour to Europe"
Membership is necessarily limited
Write now for full information to
C. P. TOWNSLEY, 2403 Broadway Great Bend, Kansas
After March 31st, 333 Fourth Ave., New York

JUST PUBLISHED VOLUME VIII, 1910-1911

American Art Annual

FLORENCE N. LEVY, Editor

A BOOK of reference on American Art and American Artists that will keep you in touch with the art activities of the entire country. ¶ Fifty illustrations of work done in the schools of fine arts and of applied arts. The prize pictures of the year are reproduced. ¶ See that the book is in your school library. Sample pages sent on request. *8vo. Cloth. Price, $5.00.*

PUBLISHED BY
AMERICAN ART ANNUAL
INCORPORATED
AMERICAN FINE ARTS BUILDING, WEST 57th STREET, NEW YORK

EAGLE SPECIAL LEADS

Nos. 245-284-314-315-251

are astonishing and pleasing in their artistic effects

Have you tried our new

No. 174-2 MIKADO?

SAMPLES GRATIS

EAGLE PENCIL COMPANY

377-379 BROADWAY, NEW YORK

Send for Catalog

Mention School Arts Book

Leather for the Crafts

WEILDA CALF (Ooze), MOLE SHEEP (Ooze), and VELVET GRAIN (Ooze Cow)

Suitable for Table Covers, Bags, Belts, Mats and all kinds of fancy-work involving

Embroidery Painting Pyrography

Tooling Cut Work

Send 15c for Art Booklets showing samples of these beautiful leathers. Write today

A. C. LAWRENCE LEATHER CO.

Art Leather Department

95 SOUTH STREET :: :: :: :: BOSTON, MASS.

RAISED METAL WORK

IF you want to introduce raised metal work into your course you need the best **Anvils** and **Hammers** on the market. The tools designed by "Rose," author of "Copper Work" are the ones you need. We also carry a complete line of tools and materials for **Jewelry** and **Silversmithing.** *Illustrated catalogue sent on application.*

BELCHER & LOOMIS HARDWARE CO.,

89-91 Weybosset St., Providence, R. I.

Do you manage YOUR business as successfully as this?
Crayon drawing from memory, by Calvin, a six-year-old boy in Colorado

Handicraft and Art Supplies

GOOD materials and plenty of them keep students enthusiastic; our quality and prices will interest you. Raffia, Reeds, Leathers, Weaving Materials, Papers, Metal Work Material and Tools, Supplies for Drawing, Color Work and Construction Work, School Supplies generally. . . . . .

CATALOGUE ON APPLICATION

GARDEN CITY EDUCATIONAL CO., 169 WABASH AVE. CHICAGO, ILLINOIS

"It is a good thing to get a new idea occasionally. Every teacher of Manual Training will surely find something worth while in this practical Collection."

Sierra Educational News.

THE CONSTRUCTION AND FLYING OF KITES

By CHARLES M. MILLER

Assistant Supervisor of Manual Training, Los Angeles, California.

THIS contains seven full-page plates of drawings of kites and fifteen figures—over forty kites shown. Details of construction given; a kite tournament is described. Full of interesting suggestions.

PRICE, 20 CENTS

COPING SAW WORK

By BEN W. JOHNSON

Supervisor of Manual Training, Seattle, Washington.

CONTAINS working drawings and suggestions for teaching a course of work in thin wood that is full of fun for the children, and affords ample means for training in form study, construction, invention and careful work. Has been called "applied mechanics for the fourth grade." PRICE, 20 CENTS.

SELECTED SHOP PROBLEMS

By GEORGE A. SEATON

Director of Manual Training, Shaw High School, Cleveland, Ohio.

THIS collection of sixteen problems in woodworking has been made to meet the needs of busy teachers of manual training. Each problem has been put to the test and has proven satisfactory to the teacher who designed it and the pupil who made it. PRICE, 20 CENTS.

Special prices in quantities. Send for the "Approved List of Books on the Manual Arts," as reprinted from THE MANUAL TRAINING MAGAZINE.

THE MANUAL ARTS PRESS, PEORIA, ILL.

FEBRUARY CONTEST

The School Arts Book Offers the Following Prizes for Good School Work Done During the Month of February, 1911

FOR BEST WORK INVOLVING THE CORRELATION OF MODEL AND OBJECT DRAWING AND OTHER SCHOOL TOPICS.

Open to all Grades, I to XII.

One First Prize: A copy of Freehand Drawing, by A. K. Cross, Ginn & Company, Publishers, and the Badge with Gold Decoration.

Five Second Prizes: Each, a copy of Blackboard Drawing, by Frederick Whitney, Milton Bradley Company, Publishers, and the Badge with Silver Decoration.

Ten Third Prizes: Each, a box of Dixon Drawing Pencils, and the Badge of the Guild.

Twenty or more Fourth Prizes: Each, the Badge of the Guild.

Forty or more Honorable Mentions: Each, a Recognition Card.

¶ The drawings must be the original work of children, must have the date when drawn, the pupil's name, age, grade, and post-office address on the back, and must be sent to Henry Turner Bailey, North Scituate, Mass. Drawings should arrive at North Scituate on or before March 3, 1911. Send only the best work, never more than five sheets from a school. Be sure to have the required information on the back of each sheet. Send the drawings flat and unsealed. Rate, one cent per ounce. Drawings receiving a reward become the property of The National Arts Publishing Company. Other drawings will be returned upon request when accompanied with sufficient postage. The awards will be made and the prizes will be distributed within two weeks. Awards will be announced in the April number.

CLASSIFIED INDEX TO ADVERTISERS

Page

ARTS AND CRAFTS OUTFITS
Forest Craft Guild xv

ARTS TEXTS, CALENDARS
Atkinson, Mentzer & Grover . . ii-iii

BOOKS
Atkinson, Mentzer & Grover . . ii-iii
Century Company vii
Heath, D. C. & Co. i
Inland Printer iv
Manual Arts Press xxii
Taylor & Holden viii
Bull, Schuyler viii

CRAYONS
American Crayon Company . Cover iv xviii
Atkinson, Mentzer & Grover . . . ii-iii
Binney & Smith . . . . . Cover ii
Dixon Crucible Co., Joseph . . . ix
Franklin Crayon Co. viii

DECORATORS
Caproni Bros., P. P. xv

DRAWING PAPER
Atkinson, Mentzer & Grover . . ii-iii
Bradley Co., Milton xiv
Hammett, J. L. & Co. xvi
Mittineague Paper Co. vi

FANCY LEATHERS
Hall, W. A. . . . . .
Hinckley, Richard W. xvi
Hunter & Co., J. B. v
Lawrence Leather Co., A. C. . . xx

INKS
Higgins & Co., Charles M. . . xix

LOOMS
Atkinson, Mentzer & Grover . . ii-iii
Hammett, J. L. & Co. . . . xvi

MANUAL TRAINING MATERIALS
Hammett, J. L. & Co. xvi
Hunter, J. B. & Co. v

PENCILS
Atkinson, Mentzer & Grover . . . ii-iii
Eagle Pencil Co. xx
Dixon Crucible Co. ix

Page

PERIODICALS
American Art Annual xix
Graphic Arts . . . . . Cover iii

PICTURES AND PRINTS
Atkinson, Mentzer & Grover . . ii-iii
Bureau of University Travel . . x
Shima, E. T. xv
Brown-Robertson Co. . . . xii

PRINTING EQUIPMENT
American Type Founders Co. . . . xi

SCHOOLS OF ART AND INDUSTRY
Booth, Laura M., Miss xix
Pratt Institute Art School . . . x
School of Applied Art, Battle Creek . xiii
School of the Worcester Art Museum . xv
Thomas Normal Training School . xiii
Batchelder, Ernest A. x

SUMMER SCHOOLS
Chicago School of Fine & Applied Arts viii

STENCIL MATERIALS
Atkinson, Mentzer & Grover . . . ii-iii
Hammett, J. L. & Co. xvi

TEACHERS' AGENCIES
Albany Teachers' Agency . . . xiii
Manual Arts Bureau xiii
Midland Specialists' Bureau . . . xiii
Pratt Teachers' Agency . . . xiii

TOOLS
Belcher & Loomis Hardware Co. . xxi
Hunter, J. B. & Co. v

TRAVELS AND TOURS
Boyd Tours x
Bureau of University Travel . . x
Chase Art Class xix

WATER COLORS
American Crayon Co. . . Cover iv xviii
Atkinson, Mentzer & Grover . . ii-iii
Bradley Co., Milton xiv
Devoe, F. W., & Raynolds, C. T., Co. iv

WEAVING, BASKETRY, AND SUPPLIES
Atkinson, Mentzer & Grover . . . ii-iii
Garden City Educational Co. . . xxi
Hammett, J. L. & Co. xvi

WOOD FINISHERS
Johnson, S. C. & Co. xvii